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SACRAMENTO - SAN JOAQUIN

# DELTA RECREATION CONCEPT PLAN

BY

MARCIA A. GEIDEL, M.S.

SUSAN J. MOORE, M.S.

JANUARY 1981

In association with  
Edilberto Z. Cajucom, Ph.D  
for the

STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES







# CALIFORNIA STATE UNIVERSITY. SACRAMENTO

6000 J STREET, SACRAMENTO, CALIFORNIA 95819

SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION  
DEPARTMENT OF PUBLIC ADMINISTRATION AND  
RECREATION AND PARK ADMINISTRATION

September, 1980

Mr. Wayne MacRostie, Chief  
Central District  
California Department of Water Resources  
3251 S Street  
Sacramento, California 95816

Dear Mr. MacRostie:

Memorandum of Agreement No. B-53405 dated August 20, 1979, designated the consultants "...to write a departmental report using the results of the Delta Outdoor Recreation Survey... The report will primarily identify recreation facilities, use, and recommendations for possible improvement, development, and provision of additional public recreation facilities in the Delta". We are pleased to submit herewith a comprehensive narrative and illustrated report of the Delta's natural, cultural, and recreation resources including a detailed inventory of existing commercial, private and public recreation areas and facilities with potential public recreation sites for future development.

We believe the data compiled, collected, analyzed, and interpreted in this report will be useful to various federal, state, and local agencies as well as private commercial enterprises involved in the planning, improvement, and development of the Delta area for various recreational uses.

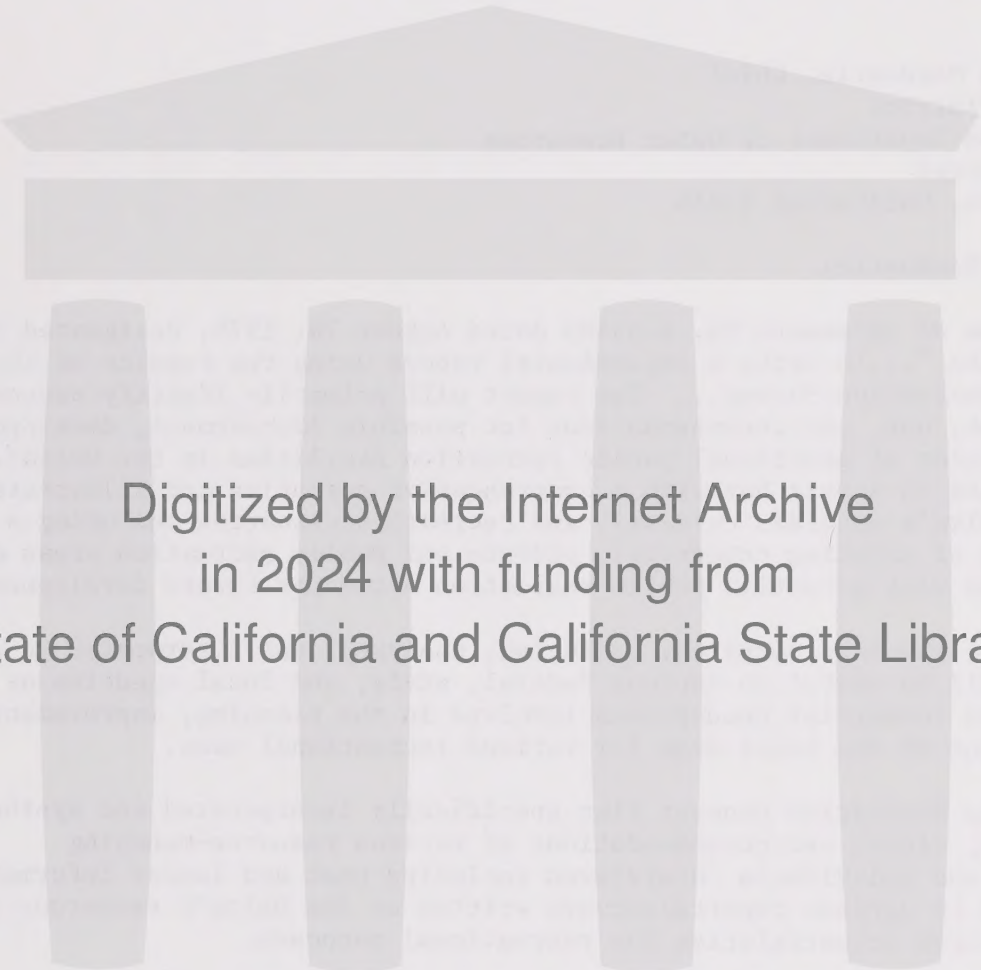
This Delta Recreation Concept Plan specifically incorporated and synthesized the ideas, views, and recommendations of various resource-managing agencies and individuals interviewed including past and latest information contained in various reports/surveys written on the Delta's resources and its unlimited potentialities for recreational purposes.

The input, cooperation, and support of the numerous agencies and individuals interviewed in connection with the valuable data included in this report are gratefully acknowledged.

Respectfully submitted,

Marcia A. Geidel, M.S.  
Susan J. Moore, M.S.  
CONSULTANTS

Edilberto Z. Cajucom



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State of California

DEPARTMENT OF WATER RESOURCES

January 1981







## EXECUTIVE SUMMARY

### Purpose of Concept Plan

The purpose of this plan was to identify the Delta's natural, cultural, and recreation resources, including a detailed inventory of existing and proposed commercial, private, and public recreation areas/facilities, and potential public recreation sites.

### Delta Recreation Concept Plan

The Delta is one of California's major outdoor recreation areas. Results of the Department of Water Resources Delta Outdoor Recreation Survey (DORS), March 1980, showed that motorboating and fishing are the most popular recreation activities of the Delta. Other popular recreation activities include relaxing, driving for pleasure, and sightseeing.

Recreation is important to the Delta's economy. Over 7 million recreationists spent almost 12 million recreation days and over \$73 million in the Delta in 1977-78 alone. Predictions for Delta recreation use forecast steady increases. If current trends continue, by 1990 approximately 14 million people will annually recreate in the Delta, without expanded development.

As a public benefit, recreation is an important component of the proposed Department of Water Resources/Army Corps of Engineers Delta levees rehabilitation program. Recreation development must be planned for integrally with proposed levee improvements, flood control, water conveyance, and navigation projects.

The preliminary Delta Recreation Concept Plan incorporated the results of the DORS to recommend potential public recreation sites. The plan specifically included a review of natural resources (geology, topography, soils, vegetation, hydrology, climate, fish and wildlife, rare/endangered plants and animals); cultural resources (historic and archeological); land and water use and transportation; existing recreation use; updated inventory of existing, proposed recreation areas/facilities/services; future recreation use projections and trends in relation to population growth; and identification of potential public recreation sites and support activities.

The process of identifying potential public recreation sites was accomplished by reviewing recommendations of concerned public agencies, past Delta studies/plans, and the current inventory of recreation facilities presently offered to the public. The following recreation deficiencies were identified: public access, picnic facilities, campsites, fishing access sites, swimming beaches, launch ramps, boater destination areas, guest docks (day use and overnight), cultural interpretive services, trails, nature preserves, hunting areas, parking areas, sanitation facilities (restrooms/pumpout stations), and trash receptacles. Efforts were directed toward selecting potential public recreation sites and facilities to meet these major deficiencies.



Fifty-six potential public recreation sites were identified: 23 recreation areas and parks; 18 fishing access sites; 4 boater destination areas; 10 nature preserves/fish and wildlife areas/conservation areas; and one historic site.

A number of proposed and potential bicycle, hiking and equestrian trails, as well as natural and cultural (historic and archeological) interpretive services sites were also identified.

Potential recreation site selection was not limited to nonproject levees only, nor was levee rehabilitation design considered since a levee rehabilitation plan had not been selected at the time this report was completed. Exact locations, types and extent of recreation development will be adjusted as the final levee rehabilitation plan is formulated.



## ACKNOWLEDGEMENTS

The Delta Recreation Concept Plan would not have been successfully carried out without the assistance, commitment, and cooperation of many agencies. The following agencies should be thanked for their contributions to this report:

### Department of Water Resources

Walt Terry  
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### Wildlife Conservation Board

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Earl A. Balch

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U. C. Davis, Department of Environmental Planning and Management

Rob Thayer

Special thanks should be extended to the commercial recreation facility owners and managers who willingly answered many questions which evolved into the updated inventory in this report.



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## INTRODUCTION



## INTRODUCTION

## THE DELTA - DESCRIPTION

This report is a preliminary recreation concept plan for the Sacramento-San Joaquin Delta (Figure 1). Information will be used in a joint California Department of Water Resources and Army Corps of Engineers investigation of rehabilitating the Delta nonproject levee system. Public recreation is a very important component of the proposed levee rehabilitation project.

Delta levees are classified into three categories: nonproject, project, and direct agreement levees (Figure 2). Nonproject levees make up 75 percent of the levees, are privately constructed, and are maintained either by island landowners or local agencies. Nonproject levees are not maintained to any set uniform standards. Project levees comprise 15 percent of the total levee system, and were either built, rebuilt, or adopted as federal flood control project levees and are maintained locally to federal standards. The remaining 10 percent of the levees are direct agreement levees and are also maintained by local districts to federal standards. They are either part of a navigation project or were rebuilt by the Federal Government after a flood disaster.

This recreation plan is conceptual in nature. It has not been adopted, nor been approved for inclusion in the plan for improvement of the Delta levees. The information is to be used as a planning tool for further consideration and discussion. The plan may be adjusted as the final levee rehabilitation program is formulated.

The Delta is a 1,100 sq. mi. triangular region at the confluence of the Sacramento-San Joaquin River system in the heart of California. Major population centers of the San Francisco Bay area, Sacramento, and Stockton border the Delta. Five counties make up the Delta: Sacramento, San Joaquin, Contra Costa, Yolo and Solano.

Over 700 miles of interconnected waterways flow around 60 major leveed islands and tracts, and approximately 800 unleveed islands. The Delta's 50,000 surface acres of water is one of the largest bodies of protected cruising water in the western United States. The two major rivers, the Sacramento and the San Joaquin, contribute to about 42 percent of the estimated natural runoff of the State.

Approximately 1,100 miles of manmade levees protect the 700,000 acres of reclaimed marshland. Some of these levees are 25 feet high and reach 200 feet at the base. Some are over 100 years old.

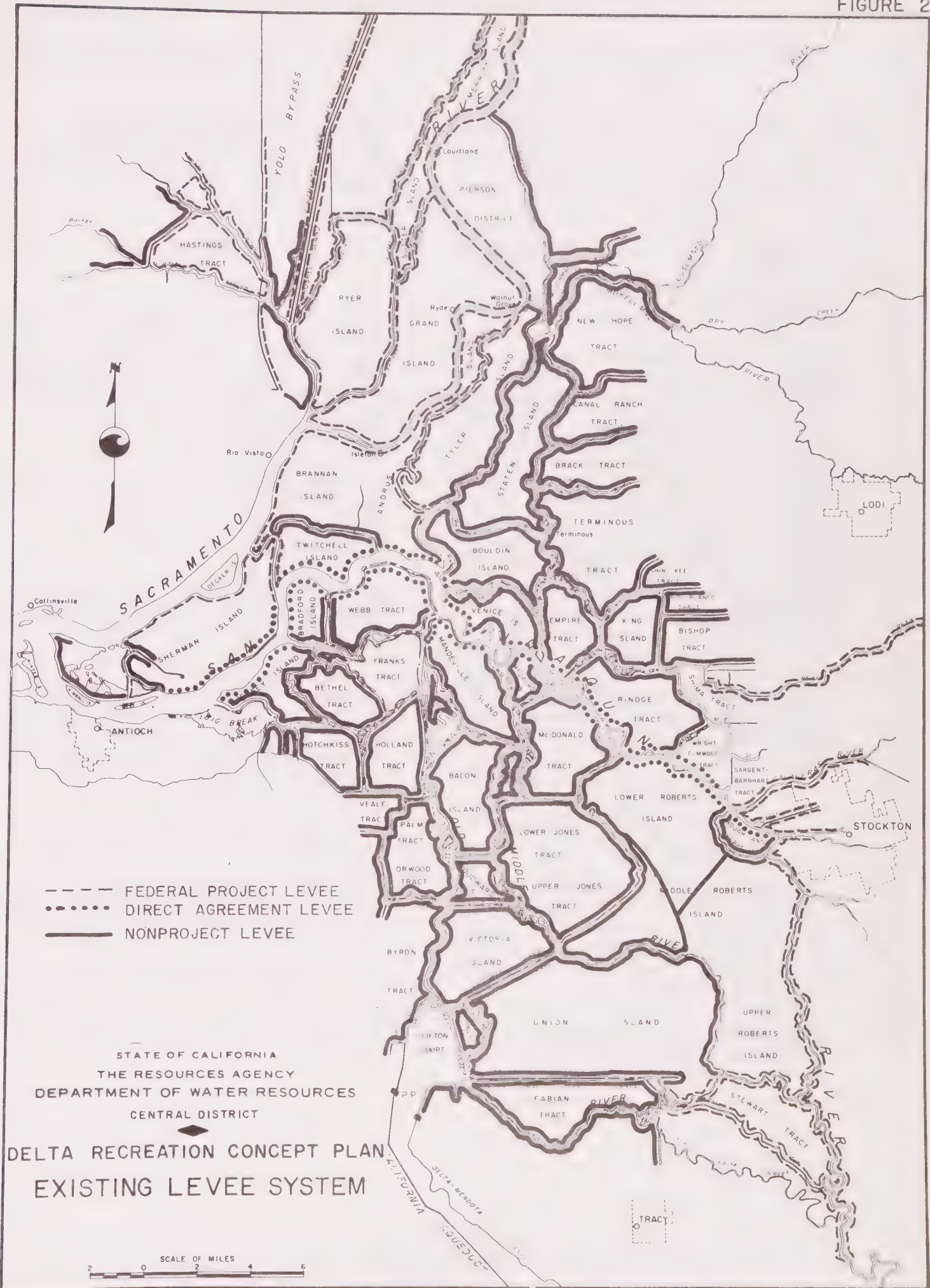
The Delta is truly a multipurpose area. Agriculture is the Delta's primary industry. About 550,000 acres of the Delta's intensely cultivated and highly organic peat soil produce crops worth over \$375 million annually.

The Delta provides migratory and resident habitat for 225 species of birds and waterfowl. The Delta's fisheries include 91 species of fish, the most abundant being striped bass, catfish, salmon, sturgeon, steelhead, and shad.



FIGURE 1







## THE DELTA - DESCRIPTION (Continued)

The Delta also serves as a transport point for northern California water being pumped south via the Bureau of Reclamation's Central Valley Project and the State Water Project.

Other major uses include high-quality gas production, commercial shipping along the Sacramento and Stockton Deep Water Channels, and recreation.

Because of its fantastic natural resources and close proximity to highly populated areas, the Delta has become a major recreation area. Recreationists enjoy a wide variety of activities including boating, fishing, hunting, sightseeing, camping, picnicking, and just plain relaxing. According to the Department of Water Resources Delta Outdoor Recreation Survey (DORS), March 1980, over 7 million recreationists spent about 11,800,000 recreation days in the Delta in 1977-78 alone. Estimations of total expenditures on recreation for that year were over \$73 million. Predictions for recreation use of the Delta forecast steady increases, with or without increased recreation development.

## THE PLANNING AREA - DESCRIPTION

The planning area falls within the boundaries of the "Legal Delta" (as defined by Section 12220 of the State Water Code). The planning area corresponds to the study area used for the DORS.

The planning area is approximately bounded on the east by Interstate 5, on the west by the Sacramento River,

## THE PLANNING AREA - DESCRIPTION (Continued)

on the north by the City of Sacramento, and on the south by Old River. Figure 3 shows the exact boundaries.

## AUTHORIZATION

This study was made under the recommendations of two California Department of Water Resources reports: A Plan for Improvement of Delta Levees, Bulletin 192, May 1975, and Delta Master Recreation Plan, September 1976.

Bulletin 192 specifically addressed the importance of including recreation development and public access when improving the Delta levee system.

Recommendation 8 of the Delta Master Recreation Plan not only called for a detailed recreation use survey, but also stated that the results of this survey would be the basis of selecting recreation development sites, determining types of recreation development needed, staging, sizing and designing needed public recreation facilities in the Delta.

As a result of recommendations in Bulletin 192, the Nejedly-Mobley Delta Levees Act (Senate Bill 1390) authorized the Department of Water Resources to complete the Sacramento-San Joaquin Delta Levees Study. The purpose of the overall study is to prepare plans and make recommendations concerning construction, cost-sharing, land use, zoning, flood control, recreation, fish and wildlife habitat, and aesthetic values.





## PURPOSE AND OBJECTIVES OF PLAN

The purpose of this plan was to identify recreation use and existing, proposed and potential recreation areas and facilities in the Delta.

Objectives were:

- \* To review natural and cultural resources, and existing land and water use
- \* To identify current recreation use
- \* To update the inventory of existing and proposed commercial, private, and public recreation areas and facilities
- \* To estimate recreation supply and demand by identifying the gap between existing supply and demand and by developing a priority system of project development to meet higher priority recreational needs
- \* To apply results and recommendations of past Delta recreation studies and plans
- \* To apply recommendations of public agencies and other interests involved in Delta recreation
- \* To establish criteria for selecting potential public recreation areas and development
- \* To identify potential public recreation areas and extent of development

## PROBLEMS RELATED TO DELTA RECREATION

Despite its enviable position as a major recreation area, the Delta is not without problems and conflicts.

Public access to land and water is extremely limited. Most of the land is in private ownership. This results in recreationists trespassing on private property, vandalism, littering, damage to levees, and pollution to waterways. The present road system causes inadequate access for land-based recreation. Very few public roads lie in the interior of the Delta. Also, there are very few public parking places along the public roads.

Existing recreation facilities are overtaxed. Public recreation areas and facilities such as launching ramps, picnic sites, mooring/berthing facilities, sewage pumpout stations, swimming beaches, boater destination areas, bank fishing areas, trails, and hunting areas are practically nonexistent.

Conflicting uses of waterways often make recreation experiences unpleasant and dangerous. For example, conflict frequently arises among waterskiers and fishermen, farmers, and between recreationists in general. This threatens public safety and endangers private property.

Threat of urban encroachment on valuable Delta land continues as residential, commercial, and industrial expansion is proposed.

## PROBLEMS RELATED TO DELTA RECREATION (Continued)

Many levees are in dire need of maintenance or rehabilitation. Some levees are simply not high enough to keep floodwaters from overtopping. Levee stability is weakened by age (some are over 100 years old), use of unstable construction materials, subsidence, boat wake action, wind action on the water, tidal fluctuation, animals burrowing in levees, and people and livestock walking on levee banks.

Subsidence of island interiors is the major reason for levee failure. As interior land surfaces decrease, water pressure on the waterside of the levees increases. This results in an unbalanced load on the levees. The levees then become unstable, break, and flood.

The rich peat soil is highly flammable. Extinguishing underground peat fires is very difficult.

Fish and wildlife populations have declined. Various water quality problems such as increased waste discharges, salinity intrusions, reverse flows, and toxicity have had negative effects. Wildlife habitat has declined due to reclamation and levee maintenance practices such as removal of vegetation from the levees or destruction of the berms, and boat wake action or wind action on the water. Other factors affecting wildlife habitat are development of structures on levees, in waterways, in riparian habitat and on islands; filling in wetlands for development or for deposition of dredging spoils; and converting agricultural lands to urban areas.

Navigation hazards are a problem. Structures and obstructions such as abandoned pilings, ferry cables, and other submerged or partially submerged objects cause accidents.

## PROBLEMS RELATED TO DELTA RECREATION (Continued)

Individuals have claimed private ownership and use of many unleveed islands that could legally belong to the State. Hopefully, Senate Bill 664 will aid in determining ownership of swamp and tideland in the Delta. Also, the Army Corps of Engineers has estimated that there are approximately 200 known violations and illegal structures in the water (i.e., private slalom courses, ski jumps, docks, etc.). Both situations decrease public recreational opportunities.

Finally, the many governing entities of the Delta are inherently in conflict due to different mandates and constituencies. As a result, planning has not been a successful coordinated effort.

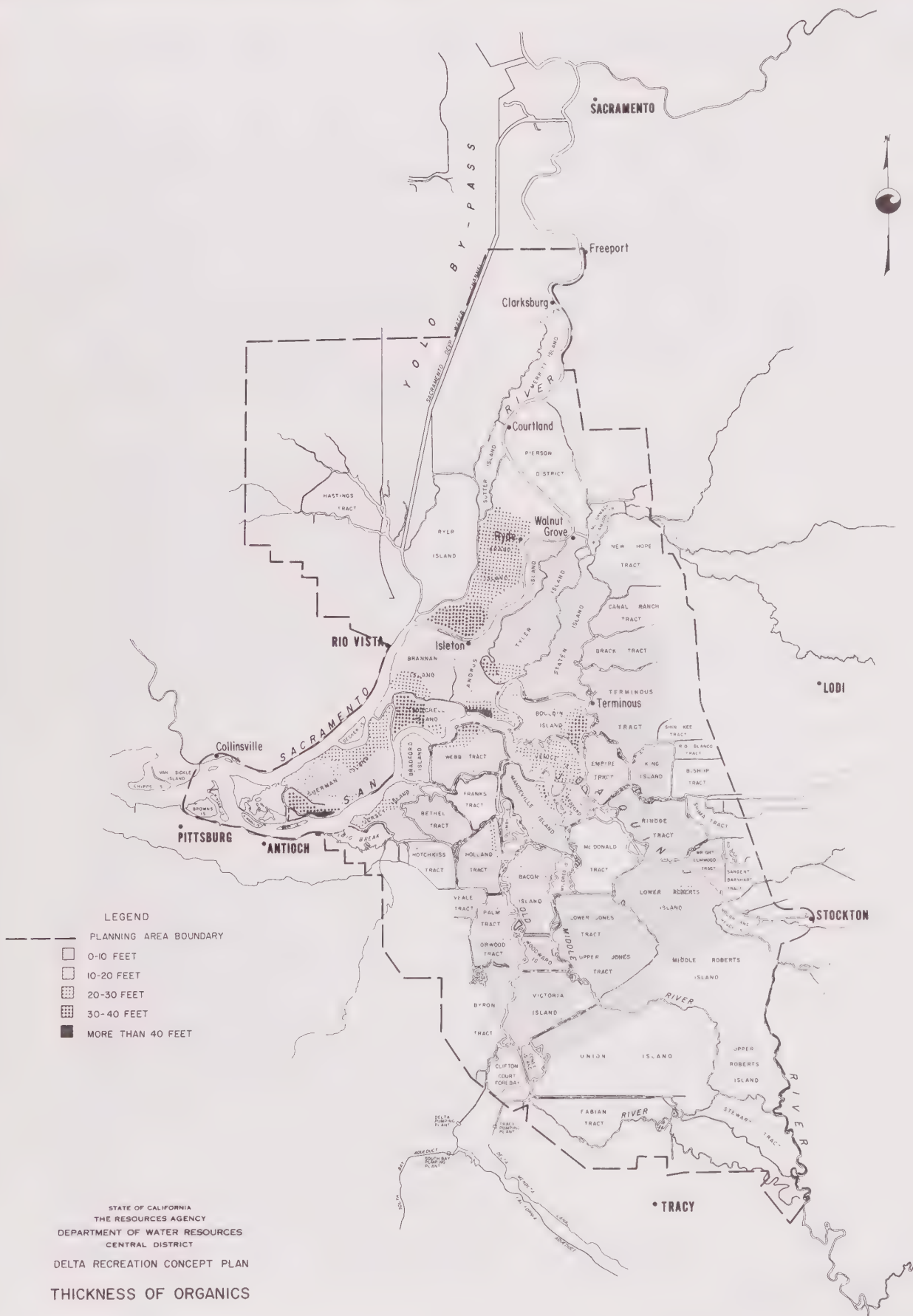
## NATURAL RESOURCES

### Geology

The Delta is part of the Central Valley geomorphic province, a northwest-trending structural basin filled with sedimentary deposits. It is also included in a geologic region often called the Bay-Delta Estuarine System because of the physical and geographical interrelationships of the San Francisco Bay and the inland Delta.

The Delta is composed of a complex deposition of unconsolidated deltic sediments: mineral alluvial sediments and highly organic peat soils. Mineral alluvium deposits developed from mineral materials being carried downstream by rivers. These are mostly silt and clay. Peat soils were formed by decayed vegetation once present in the Delta marshland (Figure 4). Prior to reclamation, much of the Delta was a vast tule marsh, and decaying





## NATURAL RESOURCES (Continued)

## NATURAL RESOURCES (Continued)

### Geology (Continued)

vegetation eventually formed deep peat deposits. Typically, deposits are organic at the top and become less organic as depth increases.

Subsidence is occurring in the rich peat soil causing elevations to drop at a rate of 7.1 to 7.6 cm (2.8 to 3 inches) per year. Subsidence is caused by oxidation, shrinkage (dewatering), wind erosion (deflation), tectonic movement, compaction (near surface due to farm equipment), consolidation, burning, and export by man.

The high water table is within a few feet of the ground surface. The high water table results in soil deposits being as saturated as they were originally deposited. Ground water is controlled by pumping from a complex network of drainage ditches.

Thirty-five natural gas fields lie beneath the surface of the Delta. Some of the major gas fields are the Rio Vista Field, the Isleton Field, McDonald and Roberts Island Fields.

The Delta is a quiet seismic area in contrast to areas in the eastern foothills of the coast range. Most of the faults in the Delta are subsurface, and are based on uncertain subsurface interpretations. Eight major earthquake faults lie in or near the Delta: the San Andreas, Hayward, Calaveras, Concord, Green Valley, Antioch, Midland, and Tracy-Stockton faults (Figure 5). Other possible faults are mapped on the Department of Water Resources Fault and Epicenter Location Map, 1977, compiled for the Delta Subsidence Study, 1980.

### Topography

The Delta ranges in elevation from 25 feet below mean sea level (m.s.l.) in

### Topography (Continued)

the central Delta to 20 feet above m.s.l. in the periphery. Most of the land is below m.s.l. and is extremely susceptible to flooding (Figures 6 and 7). With few exceptions, the land itself is flat, with little variation in slope.

### Soils

A vast number of soil associations for alluvium and organic peat soils exist in the Delta. Soils within the central Delta are predominantly organic, consisting of various peaty-mucks and fibrous soils. Outlying areas consist more of alluvium and clay soils.

The organic soils of the central Delta are not suitable for general development. Organic soils have the characteristics of infiltrating slowly, having high shrink-swell behavior, severe limitation requirements for septic tank filter fields and foundation soil pressures.

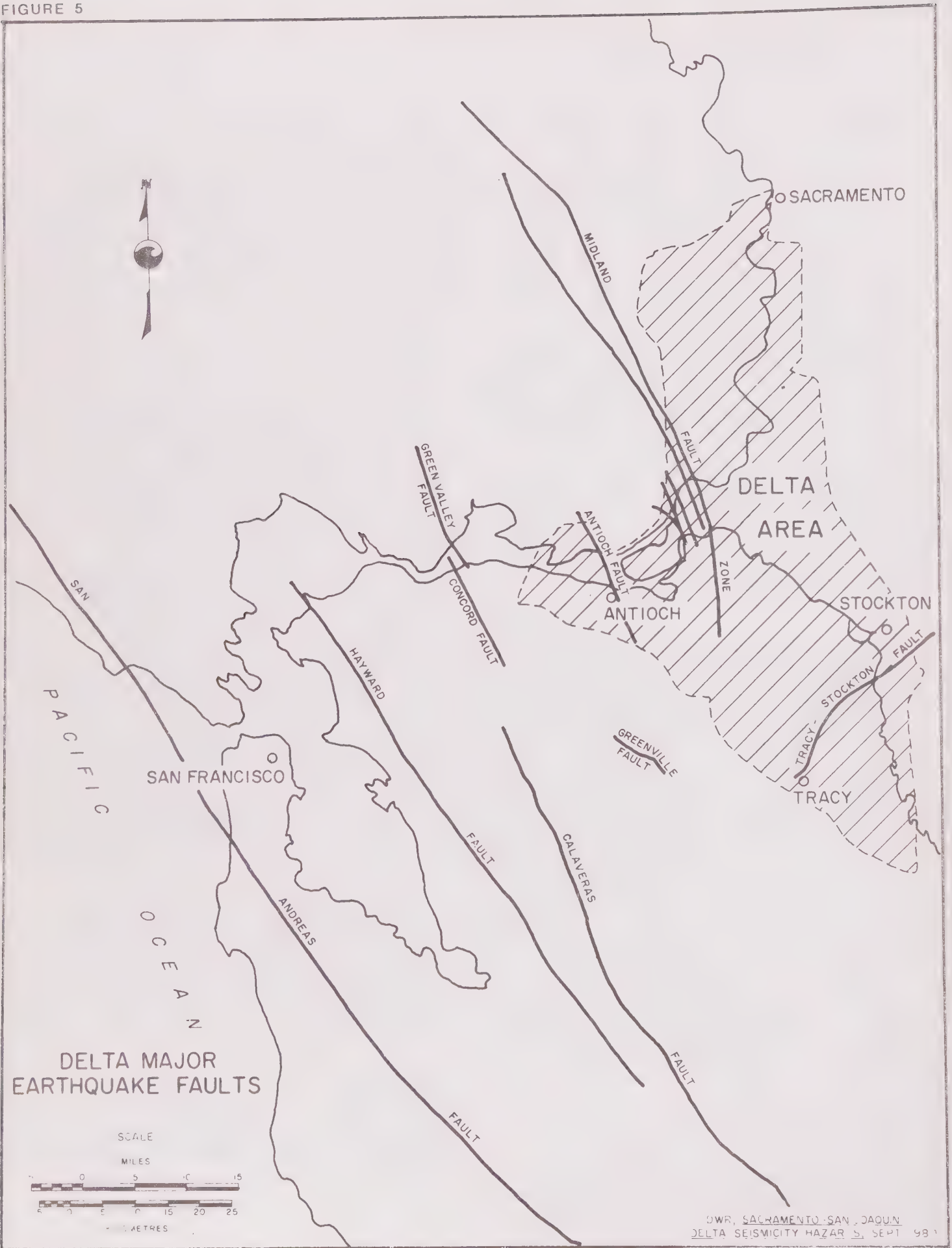
Alluvial soils of the outlying areas are limited to varying degrees. Many have the limitations on septic tank filter fields and foundation soil pressure requirements, but others are not so limiting.

General soil surveys for each Delta county analyze soil characteristics for nonagricultural use and rate various associations according to their limitations. These surveys should be consulted for general planning purposes.

### Vegetation

Vegetation in the Delta is of four different types: marshland, riparian, oak forest, and agricultural crops.

FIGURE 5





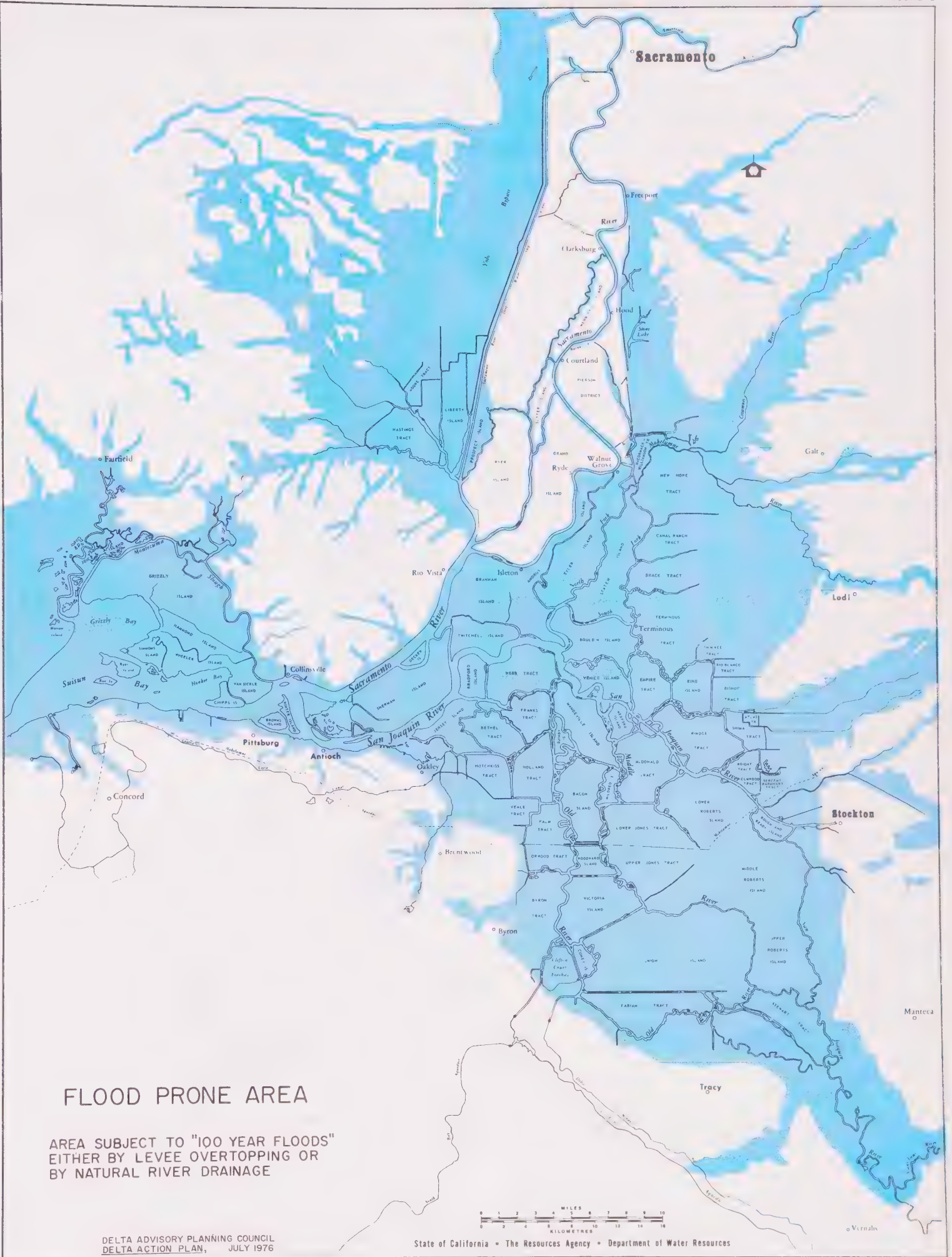


FIGURE 7





Vegetation (Continued)

Marshland areas consist of marshes, bogs, and swampland. Types of vegetation found in marshland are peat moss, blueberries, cranberries, tules, and other aquatic plants.

Riparian vegetation is found near rivers, lakes, and headwaters. Typical riparian vegetation includes willow, cottonwood, alder, wild grape, wild rose, and blackberries.

Oak forests are often called oak savannah (periodic trees on a grassland). The oak forests are remnants of near forests.

Marshland, riparian and oak forests are reminders of the Delta of the past -- a more "natural" Delta prior to reclamation. Agricultural crops came post-reclamation, after the environment had been reshaped. The Delta is noted for grapes, corn, milo, barley, asparagus, sugar beet, pears, apricots, potatoes, and other truck crops.

Hydrology

The Delta is a true estuary as it serves as a transition zone between the fresh water from inland rivers and the salt water of the ocean.

Through the years management of Delta waters has become a prime concern to the entire State. Delta waters support the many fish and wildlife species, and the multiple uses of the Delta -- agriculture, industry, recreation, and water supply.

Major sources of inland waterflow are the Sacramento and San Joaquin Rivers.

Hydrology (Continued)

Fresh waterflow patterns are essential in controlling the degree of salt water intrusion from the ocean. Tidal action from the ocean affects Delta flows and produces turbulence in the channels causing the salt and fresh water to mix. During the winter, flow patterns move continuously outward toward Antioch and Suisun Bay, keeping waters fresh (Figure 8). However, slight saline patterns occur during summer as fresh waterflows from inland sources decrease (Figure 9).

Mean water temperatures range from 8 degrees C in winter to 24 degrees C in summer. Geographically, water temperature varies little in the winter, but in summer they tend to be slightly higher in the eastern Delta.

Climate

The climate of the Delta is typical Mediterranean type with hot, rainless summers and cool, moist winters. Cool ocean breezes move eastward through the Carquinez Strait and reduce temperatures both in the Delta and the Sacramento-San Joaquin Valley. The mean annual temperature is about 60 degrees F. The temperature for the three winter months averages between 40 degrees and 50 degrees F and 75 degrees F plus in the summer. The frost-free season lasts an average of 10 months. Humidity is moderately high due to the vast water surface area and thick winter fog. Annual rainfall varies from about 15 inches at the northern end of the Delta to 10 inches at the southern end. Rainless summers necessitate irrigation.

FIGURE 8



# TYPICAL DELTA WINTER FLOW PATTERN

DWR & DFG, DELTA FISH AND WILDLIFE PROTECTION  
STUDY, DISSOLVED OXYGEN DYNAMICS - SACRAMENTO-  
SAN JOAQUIN AND SUISUN BAY OCT 1972





## TYPICAL DELTA SUMMER FLOW PATTERN

DWR & DFG, DELTA FISH AND WILDLIFE PROTECTION  
 STUDY, DISSOLVED OXYGEN DYNAMICS—SACRAMENTO-  
 SAN JOAQUIN AND SUISUN BAY OCT 1972

Fish and Wildlife

The Delta provides habitat for 91 species of anadromous and warmwater fish. Almost 70 percent of the total 132 species of fish found in California are in the Delta. Approximately 80 percent of the salmon used for commercial purposes are produced in Delta tributaries. Principal anadromous fish are king salmon, sturgeon, steelhead trout, striped bass, and American shad. Resident warmwater fish include white catfish, black crappie, large mouth bass, bluegill, threadpin shad, Sacramento perch, log perch, rough fish, and shellfish (crayfish, freshwater clams).

The Delta is one of the most significant waterfowl areas in the State. Delta wetlands are an important part of the Pacific Flyway.

About 225 species of birds are in the Delta. Some of the most common species are grebes, herons, swans, sandhill cranes, geese, ducks, hawks, white-tailed kites, owls, kingfishers, shorebirds, poorwills, woodpeckers, wrens, thrushes, warblers, flycatchers, swallows, blackbirds, sparrows, quail, mourning doves, and pheasants.

Approximately 39 species of mammal roam the Delta. They include beaver, muskrat, river otter, raccoon, mink, skunk, weasel, opossum, gray fox, gopher, mole, mice, squirrel, rabbit, and deer.

The 19 species of reptile and 8 species of amphibian include snakes (Alameda striped racer, giant garter, aquatic garter, common garter, gopher king), lizards (western fence, southern alligator, Californie legless lizard), bullfrogs, and Pacific pond turtles.

Fish and Wildlife (Continued)Rare and Endangered Plants and Animals

Three Delta plants have been placed on the U. S. Fish and Wildlife Service endangered species list: Contra Costa wallflower, Antioch Dunes evening primrose, and Crampton's orcuttia. The Contra Costa wallflower and Antioch Dunes evening primrose have also been listed on the California Fish and Wildlife Service endangered plants list. Other rare or threatened plants are the slough thistle, a sunflower, Delta coyote thistle, fragrant frillary, California hibiscus, northern California Black walnut, lilaeopsis, bearded alocarya, caper-fruited tropidocarpum, Suisun aster, colersa grass, Delta tule pea, bolander water hemlock, and gum-plant. (See Table 1 and Figure 10.)

Ten species of fish and wildlife appear on Federal and State rare and endangered species lists: Five are birds: bald eagle, Aleutian Canadian goose, yellow-billed cuckoo, peregrine falcon, California black rail. Two are mammals: San Joaquin kit fox, salt marsh harvest mouse. One reptile: giant garter snake. One fish: thicktail chub. One insect: Lange's metalmark butterfly. (See Table 2 and Figure 10.)

Significant Natural Resource Areas

The Delta Advisory Council's Delta Action Plan, 1976 and Army Corps of Engineers Sacramento-San Joaquin Delta California Environmental Atlas, July 1979, identified significant natural resource areas having "important open space, ecological, scientific, educational, or wildlife values" (DAPC, 1976). These areas are listed in Table 3 and mapped on Figure 11.

TABLE 1  
RARE AND ENDANGERED PLANTS WHICH MAY OCCUR  
WITHIN THE SACRAMENTO-SAN JOAQUIN DELTA<sup>1</sup>

SYMBOL	SPECIES	STATUS	HABITAT AND DISTRIBUTION	COMMENTS
P1	<i>Cirsium crassicaule</i> <sup>1</sup> (Slough thistle)	T <sup>2</sup> , CNPS	Shallow water, wet places in fields near San Joaquin River.	Annual (?), whitish pinkish flowers.
--	<i>Balsamorhiza macrolepis macrolepis</i> <sup>1</sup> (A sunflower)	CNPS	Open grassy slopes; valley grasslands, inner coast range and adjacent valleys.	Not rare or endangered but limited in distribution. Yellow flowered perennial.
P2	<i>Eryngium racemosum</i> <sup>1</sup> (Delta coyote thistle)	T <sup>2</sup> , CNPS	Low wet places below 100'.	Perennial, blue or purple flowers.
P3	<i>Erysimum capitatum</i> var. <i>angustatum</i> (Contra Costa wallflower)	E <sup>3</sup> , CNPS, E <sup>4</sup>	Dry stony places.	Biennial flowers yellow to purple.
--	<i>Fritillaria liliacea</i> (Fragrant fritillary)	CNPS	Heavy soil, open hills and fields.	Perennial, white flowers. Rare but not endangered.
P4	<i>Hibiscus californicus</i> <sup>1</sup> (California hibiscus)	E <sup>2</sup> , CNPS	Moist banks, freshwater marsh, lower Sacramento and San Joaquin Rivers.	Shrub, white or pinkish flowers with crimson centers.
--	<i>Juglans hindsii</i> (Northern California black walnut)	E <sup>2</sup>	Oak woodland.	Tree, one trunk, 15 to 19 leaflets.
P5	<i>Lilaeopsis masonii</i> <sup>1</sup> (Lilaeopsis)	CNPS	Zone of tidal fluctuation of the Lower Delta.	White flowered perennial. Recent sightings.
P6	<i>Oenothera deltoidea</i> var. <i>howellii</i> <sup>1</sup> (Antioch Dunes evening primrose)	E <sup>3</sup> , CNPS, E <sup>4</sup>	Sand dunes near Antioch.	Annual, white to aging pink flowers.
--	<i>Plagiobothrys hystriculus</i> (Bearded allocarya)	T <sup>2</sup> , CNPS	Plains and hills, valley grasslands.	White flowered annual.
P7	<i>Tropidocarpum capparideum</i> <sup>1</sup> (Caper-fruited tropidocarpum)	T <sup>2</sup>	Alkaline soils, low hills, below 100'.	Annual, yellow flowers.
P8	<i>Aster chilensis</i> <sup>1</sup> (Suisun aster)	CNPS	Marshes around Suisun Bay.	Perennial, purple to violet flowers.
P9	<i>Neostapfia colusana</i> (Colusa grass)	CNPS	About vernal rain pools.	Low annual grass.
P10	<i>Orcuttia mucronata</i> (Crampton's orcuttia)	E <sup>3</sup> , CNPS	About vernal rain pools.	Low annual grass.
P11	<i>Lathyrus jepsonii jepsonii</i> (Delta tule pea)	CNPS	Freshwater marsh.	Perennial with crimson to rose-purple flowers.
P12	<i>Cicuta bolanderi</i> (Bolander water hemlock)	CNPS	Intertidal areas in western Delta.	Perennial, white flowers.
P13	<i>Grindelia paludosa</i> (Gum-plant)	CNPS	Intertidal areas in western Delta.	Perennial (?), yellow flowers.

CNPS - California Native Plant Society.

T - Threatened.

E - Endangered.

<sup>1</sup>Identified as being within the Delta.

These plants have been placed on a petition by the Smithsonian Institute and submitted to the U.S. Fish and Wildlife Service for inclusion on the Endangered or Threatened List.

<sup>3</sup>This plant has been placed on the endangered list by the U.S. Fish and Wildlife Service.

<sup>4</sup>This plant has been placed on the State endangered list by the California Department of Fish and Game.



TABLE 2  
RARE AND ENDANGERED FISH AND WILDLIFE WHOSE DISTRIBUTION  
INCLUDES THE SACRAMENTO-SAN JOAQUIN DELTA AREA

SYMBOL	COMMON AND SCIENTIFIC NAMES	STATUS	DISTRIBUTION	COMMENTS
--	Southern bald eagle ( <i>Haliaeetus leucocephalus leucocephalus</i> )	E <sup>1,2</sup>	Ranges over most of California, nests in coastal and interior mountains.	Decline appears to be due to shooting, removal of nesting trees, human encroachment and environmental pollution (e.g., pesticides) resulting in reduced reproductive success.
--	American peregrine falcon ( <i>Falco peregrinus anatum</i> )	E <sup>1,2</sup>	Extinct as a breeding bird east of the Rocky Mountains. Breeds in the mountains and along the coast in California.	Human disturbances and pesticides in food chain have endangered this bird.
A1	California black rail ( <i>Laterallus jamaicensis coturniculus</i> )	R <sup>2</sup>	Found in tidal marshes, usually associated with pickleweed, from Tomales Bay south to the Colorado River and inland to Stockton, Riverside and the Salton Sea.	The filling of marshes has eliminated much of its habitat.
--	Aleutian Canada goose ( <i>Branta canadensis leucoparvia</i> )	E <sup>1</sup>	Does winter within the Sacramento Valley.	Decline due to predation on breeding grounds.
--	California yellow-billed cuckoo ( <i>Cossyus americanus occidentalis</i> )	R <sup>2</sup>	Sparse breeding populations are now known to occur along the Sacramento River from Red Bluff to Colusa during June, July or August.	Has also been identified south of Stockton on the Stanislaus River. Suitable habitat does exist within the Delta.
A2	Salt marsh harvest mouse ( <i>Reithrodontomys rivarentis</i> )	E <sup>2</sup>	Formerly found throughout the extensive marshes once bordering San Francisco Bay. Now restricted to scattered colonies within its original range.	Loss of habitat due to destruction of salt marshes.
A3	San Joaquin kit fox ( <i>Vulpes macrotis mutica</i> )	R <sup>2</sup> , E <sup>1</sup>	Occurs from Tehachapi Mountain foothills surrounding the southern end of the San Joaquin Valley, north along the western foothills of the valley.	Restricted to areas of native vegetation supporting kangaroo rats. Conversion of valley lands to irrigated agriculture is reducing its range.
A4	Giant garter snake ( <i>Thamnophis couchi gigas</i> )	R <sup>2</sup>	Known distribution extends from near Lodi to near Modesto. One of the most aquatic of garter snakes and is confined to areas around permanent fresh water.	Populations have been decimated or eliminated by land use changes and the filling of sloughs and drainage of marshy areas.
--	Thicktail chub ( <i>Gila crassicauda</i> )	E <sup>2</sup>	The last known specimen was collected in 1957 from Steamboat Slough. Once included the Sacramento and San Joaquin River systems.	May now be extinct.
A5	Lange's metalmark butterfly ( <i>Apodemis mormo langei</i> )	E <sup>1</sup>	Populations restricted to a few acres north of Wilbur Road near Antioch.	Loss of habitat due largely to industrial and agricultural development.

E - Endangered.

R - Rare.

<sup>1</sup>U.S. Fish and Wildlife Service, May 1974. United States List of Endangered Fauna (and updates).

<sup>2</sup>California Department of Fish and Game. January 1979. At the Crossroads.

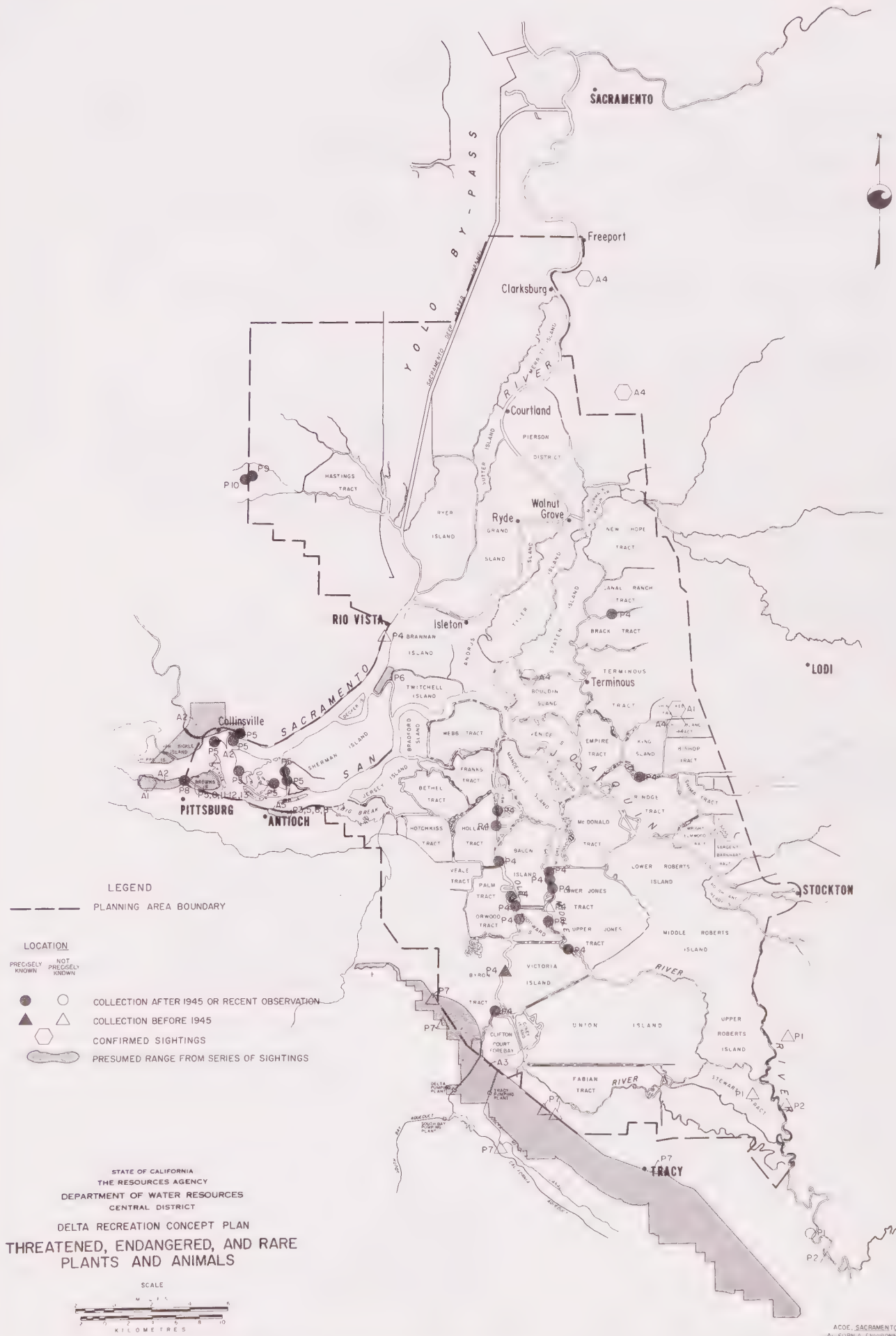


TABLE 3

## SIGNIFICANT DELTA NATURAL RESOURCE AREAS

Symbol	Area	Description of Area
1	Putah Creek	Riparian habitat. Designated natural area by Delta Master Recreation Plan (DMRP).
2	Babel Slough	Beautiful small slough with abundant wildlife.
3	Winchester Lake	Riparian habitat.
4	Stone Lake Complex	Lakes, marsh, riparian, and upland habitat with oaks. Most important ecological area in Delta. Rare and endangered plants and animals found here. Slough thistle and giant garter snake. Great blue heron and egret rookeries. Many archeological sites.
5	Elk Slough	Riparian habitat, scenic, full of fallen trees. Good aquatic habitat. Archeological sites. Designated natural area by DMRP.
6	Delta Meadows, Snodgrass Slough, Badger Slough, Mokelumne-Cosumnes River Complex	Marsh, riparian and upland habitat, many oaks. Ecologically tied to Stone Lake Basin. Invaluable ecological area. Heavy early winter use by sandhill cranes. Area of great archeological interest. Contains National Natural Landmark Area (Cosumnes River Riparian Woodland), and a National Historical Landmark (Delta Meadows). Designated natural areas by DMRP, Planned Wildlife Management Area.
7	Vernal Pools West of Hastings Tract	Habitat for two rare and endangered plants. Colusa grass and Crampton's Orcuttia.
8	Lindsey Slough Area	Black crowned night heron rookery and heavy raptor use. Archeological site. Part of Lindsey Slough designated scenic area by DMRP. Other part of Lindsey Slough, Barker Slough, and Calhoun Cut designated natural area by DMRP.



TABLE 3 (Continued)

<u>Symbol</u>	<u>Area</u>	<u>Description of Area</u>
9	Prospect Slough	Scenic, upland and riparian habitat. Impressive open water-way vista. Designated natural area by DMRP.
10	Miner Slough	Emerging marsh, scenic. Designated natural area by DMRP.
11	Steamboat Slough	Scenic riparian habitat and archeological site. Designated scenic area by DMRP.
12	Beaver Slough	The northernmost of the 3 major deadend sloughs, with the most extensive riparian vegetation. East of Blossom Road, trees are well-developed; many snags in water. East end inaccessible to all but small, slow boats, preserving wildlife habitat. Surrounded by sandhill crane winter habitat.
13	Blossom Slough	Valuable bird refuge. Privately owned.
14	Hog Slough	Intermittent marsh. Important sandhill crane roosting area. Archeological site. Designated scenic area by DMRP.
15	Sycamore Slough	Black crowned night heron rookery. Designated scenic area by DMRP.
16	Island, South Fork of Mokelumne River	Upland habitat. Designated natural area by DMRP.
17	Cliff House Beach	Scenic, woody vegetation largest Delta beach.
18	Sevenmile Slough	High recreation potential. Designated natural area by DMRP.
19	Sacramento River Bluffs	Scenic, native vegetation, unusual Delta geology, only such formation along Sacramento River.

TABLE 3 (Continued)

Symbol	Area	Description of Area
20	White Slough and Marsh, and Potato and Little Potato Sloughs	Channel Islands, marsh, riparian habitat, very scenic. Two rare and endangered animals have been sighted here. The giant garter snake and the California black rail. Also Grindstone Joe's, an island reclaimed and beautified by one man in 1930's, now a private club. Marsh areas and islands designated natural areas by DMRP. Sloughs designated scenic areas by DMRP.
21	Potato Point	100 acres of original Delta vegetation. Beaver ponds, rail habitat, and intense waterfowl, shorebird, and raptor use.
22	Disappointment Slough	Channel tidal islands. Some levee riparian habitat. Black crowned night heron rookery. Islands designated natural area by DMRP. Slough designated scenic area by DMRP.
23	Entrapment Zone	The entrapment zone occurs generally between Honker Bay and Antioch. Here suspended organics and nutrients tend to accumulate, creating a highly biologically productive area.
24	Salt Marsh West of Pittsburg	Habitat for salt marsh harvest mouse and California black rail, both on rare and endangered list.
25	Browns Island and Winter Island	Upland habitat, blue heron rookery, two rare and endangered animals, and five rare and endangered plants.
26	Pittsburg-Antioch Marsh	Large marsh, open space between industry.
27	Antioch Sand Dunes, San Joaquin River	40-acre site that is the home of three plants on the rare and endangered list. Also a rare and endangered butterfly and the California legless lizard.

TABLE 3 (Continued)

Symbol	Area	Description of Area
28	Antioch Sand Dunes and Quarry Canyon	Habitat of California legless lizard and a scenic revegetated quarry with high park value.
29	Big Break	Emergent marsh. Tract flooded in 1930's. Good fishing. Designated natural area by DMRP.
30	Little Franks Tract	A wetland marsh protected by a levee. Great potential for bird watching. Black-crowned night heron rookery.
31	Franks Tract	Flooded island of 3,507 acres, of which all but 300 acres are under water. Popular recreation area for boating, fishing, and water-skiing. Designated scenic area by DMRP.
32	Sand Mound Slough	Islands designated natural areas by DMRP. Slough designated scenic area by DMRP.
33	Connection Slough	Contains upland habitat, marsh, tidal islands, islands, and excellent wildlife habitat including a large population of white tailed kites. Islands, except Quimby Island, designated natural areas by DMRP. Sloughs designated scenic areas by DMRP.
34	Latham Slough	Channel tidal islands. Some levee riparian habitat. Designated natural area by DMRP.
35	Stockton Deep Water Channel Islands	Upland habitat, oaks, scenic. Designated natural area by DMRP.
36	Byron Alkali Vernal Pools	250-acre site supporting unique flora adapted to alkaline water.
37	Eucalyptus Island	Upland habitat. Flooded island. Designated natural area by DMRP.



TABLE 3 (Continued)

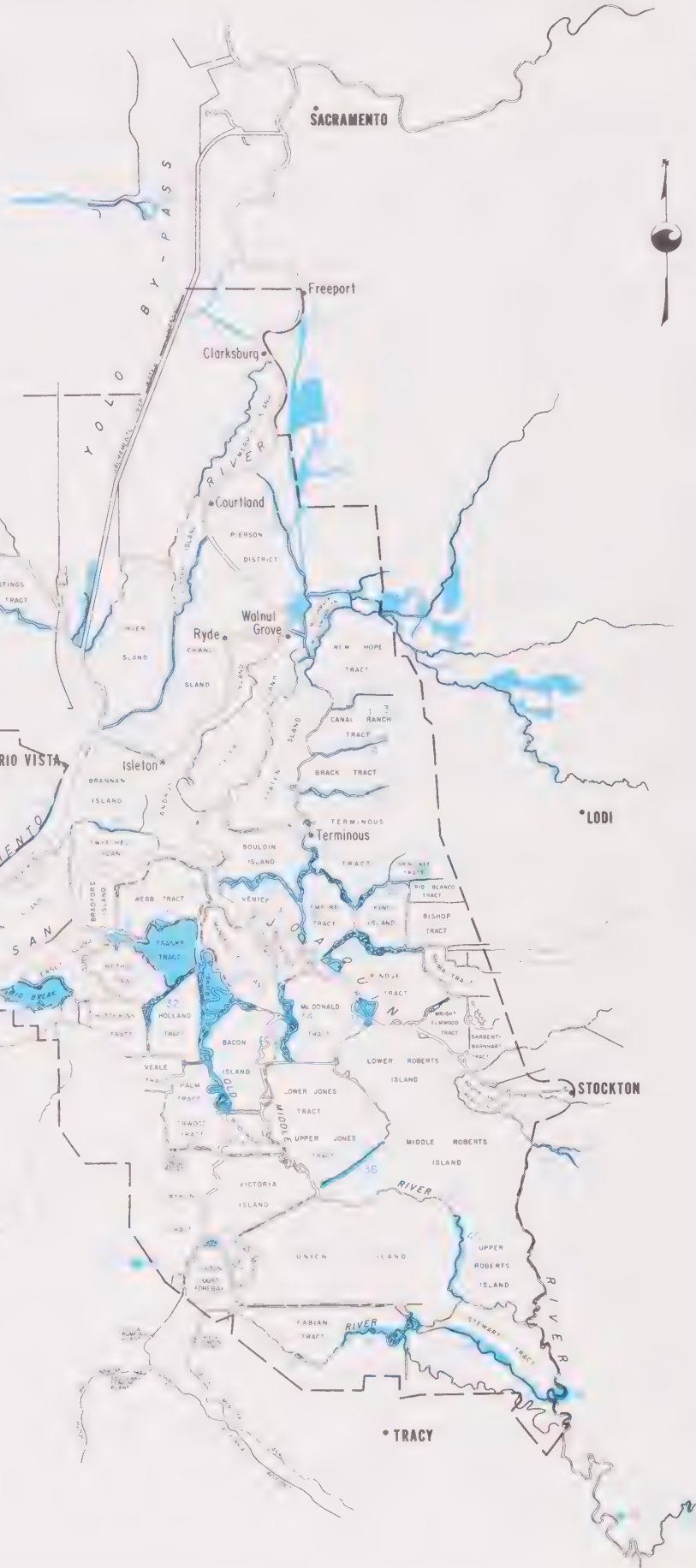
Symbol	Area	Description of Area
38	Trapper Slough	Freshwater marsh with a lush growth of water hyacinth and yellow water weed. Supports muskrats, highly productive fishery, and a wide variety of birds. Designated natural area by DMRP.
39	French Camp Slough	Riparian habitat. Archeological site. Designated natural area by DMRP.
40	Middle River, Upper	Riparian habitat, scenic, invaluable well-vegetated ecological area. Archeological site. Designated natural area by DMRP.
41	Island in Old River	Upland habitat. Designated natural area by DMRP.
42	Old River Islands Area	Upland island, riparian habitat, oaks, very scenic. Authorized State park since 1964, but may be dropped. Archeological site. Designated natural area by DMRP.
43	Paradise Cut	Riparian habitat. Recreation potential. Archeological site. Designated natural area by DMRP.
44	Circle Lake	Fish spawning area. Oxbow Lake. High recreation potential.
45	South County Park	Riparian habitat.
46	Caswell Memorial Park	Riparian forest. Blue heron rookery.

SIGNIFICANT DELTA NATURAL RESOURCE AREAS

Symbol	Area	Symbol	Area
1.	Pulaski Creek	24.	Salt Marsh West of Pittsburg
2.	Babel Slough	25.	Browns Island and Winter Island
3.	Winchester Lake	26.	Pittsburg - Antioch Marsh
4.	Stone Lake Complex	27.	Antioch Sand Dunes, San Joaquin River
5.	Elk Slough	28.	Antioch Sand Dunes and Quarry Canyon
6.	Delta Meadows, Shodgrass Slough, Badger Slough, Mokelumne - Consumnes River Complex	29.	Big Break
7.	Vernal Pools West of Hastings Tract	30.	Little Frank's Tract
8.	Lindsey Slough Area	31.	Frank's Tract
9.	Prospect Slough	32.	Sand Mound Slough
10.	Miner Slough	33.	Connection Slough
11.	Steamboat Slough	34.	Latham Slough
12.	Beaver Slough	35.	Stockton Deep Water Channel Islands
13.	Blossom Slough	36.	Byron Alkaline Vernal Pools
14.	Hog Slough	37.	Eucalyptus Island
15.	Sycamore Slough	38.	Trapper Slough
16.	Island, South Fork of Mokelumne River	39.	French Camp Slough
17.	Cliff House Beach	40.	Middle River, Upper
18.	Seven Mile Slough	41.	Island in Old River
19.	Sacramento River Bluffs	42.	Old River Islands Area
20.	White Slough and Marsh, Potato and Little Potato Sloughs	43.	Paradise Cut
21.	Potato Point	44.	Circle Lake
22.	Disappointment Slough	45.	South County Park
23.	Entrapment Zone	46.	Caswell Memorial Park

LEGEND  
 PLANNING AREA BOUNDARY

STATE OF CALIFORNIA  
 THE RESOURCES AGENCY  
 DEPARTMENT OF WATER RESOURCES  
 CENTRAL DISTRICT  
 DELTA RECREATION CONCEPT PLAN  
 SIGNIFICANT DELTA  
 NATURAL RESOURCE AREAS



Historic Resources

The first known inhabitants in the Delta were the Miwok, Wintun, Maidus, and Yokut Indians. Until 1830, about 13,000 Indians lived in the Delta. This was when the Delta was a low, flat, thickly wooded marsh crisscrossed with waterways. Great herds of deer and elk, flocks of waterfowl and upland game, and scores of large fish provided the Indians with a rich, peaceful life.

Then in 1772, Spanish explorers Fray Juan Crespi and Pedro Fages discovered the Delta, and Delta life began to change. Soon colonization of dry land surrounding the Delta began.

Most of the Indian population was wiped out by the early 1830's. Wars with the Spaniards and disease had taken their lives. By 1870, the Indian population had decreased to five.

Trappers discovered the highly marketable beaver, muskrat, freshwater mink, and otter resources of the Delta in 1830. By the mid-1840's these animals were almost extinct.

Land grants were awarded by the Mexican government for the Delta periphery between 1835 and 1844. Grant holders soon established colonies along navigable waters.

Discovery of gold in the Mother Lode in 1848 triggered development of the Delta. Soon, steamboats cruised Delta waters transporting miners and supplies to the booming Sacramento and Stockton settlements. The steamboat era continued to be in its prime transporting passengers and crops until 1871. Completion of the railroads in the late 1800's marked an end to the steamboat era. Also, siltation from hydraulic mining reduced the

Historic Resources (Continued)

rivers' effectiveness as shipping routes. Later, trains were replaced by trucks.

After the gold rush, many miners turned to farming. Reclamation began in 1850 in an attempt to protect the valuable land from flooding. The first levees were hand-built by Chinese laborers. Later, the clam-shell dredge was used to build levees. By 1930, most marshes had been reclaimed and were being farmed.

A number of historic sites located in or near the Delta have been identified in various documents, particularly the Delta Advisory Council's Delta Action Plan, 1976, and its Delta Plan Technical Supplement II, Delta Historic Resources, May 1976; and the Army Corps of Engineers Sacramento-San Joaquin Delta California Environmental Atlas, July 1979.

Table 4 and Figure 12 review those significant historic Delta sites.

Archeological Resources

A total of 202 archeological sites have been recorded in the Delta, but there are potentially many more (Figure 12). Reclamation and agricultural practices have probably disturbed many sites before a systematic archeological survey was accomplished.

As discussed in the Historic Resources section, the Delta was once inhabited by Miwok, Wintun, Maidus, and Yokut Indians. The Indians located near water for food and water supply. Most of the archeological sites are located around the Mokelumne, Sacramento, and San Joaquin Rivers.



## CULTURAL RESOURCES (Continued)

### Archeological Resources (Continued)

The California Department of Parks and Recreation's State Historic Preservation Office should be contacted for specific information on individual sites.

TABLE 4

## SIGNIFICANT DELTA HISTORIC RESOURCES

Symbol	Site	Significance
1	Yolo County Courthouse	County seat until flooded in 1850.
2	First Pacific Coast Salmon Cannery	Site of barge used in 1864-1866. Developed salmon-canning technique.
3	Camp Union, near Sutterville	Site of Union soldier training area - 1861.
4	Sutterville, on Sacramento River	Site of first settlement on the river. Built 1846.
5	Town of Freeport	Founded in 1850 to avoid city taxes.
6	Beach Family Home, south of Freeport on River Road	Victorian building. May be the oldest home in Sacramento County.
7	Town of Clarksburg, Sacramento River	Built in 1849.
8	Eddinger House on River Road near Hood	Victorian building. Built by designer of Governor's Mansion.
9	Town of Courtland, Sacramento River	Founded in 1870.
10	Town of Paintersville, Sacramento River	Site of home of the "Fence Post Bank".
11	Steamboat Slough "Dolphin"	Site of device to enable steamboats to turn. First State investment to aid navigation.
12	Port of Maine Prairie, head of Cache Slough	Site of port. Built in 1859.
13	River Mansion, Steamboat Slough	Elegant mansion built in 1918.
14	Town of Locke, Sacramento River	The most unique and important Delta historic area. Built in 1915. Only Chinese-built town in U.S. still standing.

TABLE 4 (Continued)

Symbol	Site	Significance
15	Delta Meadows Archeological Site, near Locke	Site of Indian village.
16	Town of Walnut Grove	Founded in 1851.
17	Ryde Hotel	Built in 1890's. Replaced in 1926. Retains 1920's atmosphere.
18	Benson's Ferry, Mokelumne River	Remains of old building. Benson tried to form "Mokelumne County".
19	Port of Mokelumne City	Site of deepwater port built in 1850. Destroyed by flood in 1862.
20	Town of Thornton	Established 1855.
21	Town of Woodbridge	Established in 1859.
22	Town of Isleton, Sacramento River	Founded in 1874.
23	Grindstone Joe's, Little Potato Slough	Reclaimed and beautified island done by one man in 1930's. Now a private club.
24	Beached Riverboat, North MacDonald Island	The last remnant of riverboat history.
25	Town of Collinsville, Sacramento River	Originally a fishing village on stilts, built in 1859. Once had three salmon canneries.
26	Hastings Adobe (or Montezuma's Adobe)	Built in 1846. Second oldest building in Solano County.
27	Pittsburg Historical District, Foot of Railroad Avenue at Waterfront	Site of historic events and persons relating to fishing, shipping, the railroads, and the founders of Pittsburg. Was the Rancho Los Medanos, a land grant awarded by Governor Don Bautista.
28	Mine Shafts Nortonville/Somersville, Coal Mines Regional Park	Coal (the "Black Diamond") was discovered in foothills in 1850. Noah Norton built the first home in the area in 1861 -- later known as Nortonville. Mining families were mostly from England and Wales.



TABLE 4 (Continued)

Symbol	Site	Significance
29	Empire Basin Area, Empire Mine Road	Sites of Judsonville, Empire Mine, Stewartsville, and Star Mine.
30	Liberty Grammar School, Deer Valley and Marsh Creek Roads	Site of early school in foothills.
31	Babbe's Landing, Foot of Seller Road on Dutch Slough, east of Oakley	Early boat landing for horse and hay transport to San Francisco.
32	Iron Horse School, Cypress Road and Sellers Avenue	Early schoolhouse, built in 1850's. Now a residence.
33	Murphy Home and Wallace Home at 800 and 828 Railroad Avenue, Brentwood	Homes of early residents. Victorian style. Built around 1909.
34	Coats Hall, Highway 4, near Oak Street, Brentwood	One of the oldest buildings in Brentwood.
35	McCabe House, Byron Highway, at end of Brentwood Road, east of Brentwood	Home of early pioneers circa 1860. Much-decorated Victorian style structure.
36	Point of Timber Trading Center, East of Union Cemetery at Point of Timber Road and Highway 4, north of Byron	Site of Wolf and Kahn Store, Lehman and Davis Blacksmith Shop, and post office 1869 to 1882.
37	Point of Timber Landing, Indian Slough, off Old River Road, northwest of Byron	Site of warehouse, lumber yard, shipping point for grain.
38	Geddes House, Marsh Creek Road, west of Highway 4	Built in 1870, a 2-story Victorian structure.
39	Town of Byron	Founded in late 1800's.
40	John Marsh Home, on Marsh Creek Road, 2-1/2 mi. southwest of Brentwood	Mansion known as the "Stone House" was begun in 1852, completed in 1856, a 3-story Victorian Gothic and Italian villa. However, it was never lived in by the Marshes.

TABLE 4 (Continued)

Symbol	Site	Significance
41	Byron Hot Springs Hotel, Hot Springs Road, near County Road J4, south of Byron	Health spa in late 1880's and early 1900's. Mud baths, deteriorating hotel. 100-yr-old Victorian manager's house and cottages are still there. Hot springs are still active. Japanese prisoner camp during World War II. Also was a Balbones Indian campsite.
42	Vasco Caves, south of Byron Hot Springs Road	Hideout of Joaquin Murietta, infamous bandit.
43	City of Stockton Waterfront and downtown area from Harding Way south to Clay Street	Includes portion of original Mexican grant. Once had substantial river history-related buildings, now mostly lost to redevelopment.
44	First improved road in California	Site of demonstration road for 1907 conference.
45	Site of Hudson Bay fur trappers' encampment. Near French Camp	Encampment from 1832-1844.
46	Dutch Point	Early public house on all-weather road. Stockton to the southern mines. Outside of Legal Delta but pertinent.
47	Brick silos and brick barns between Paradise Slough and San Joaquin River, near Highway 205	Built in 1930's. Five silos are scenic landmark. Barn could be restored for museum. Owners will preserve.
48	First Transcontinental Railroad Linkup, Mossdale Crossing	Site of completion of Pacific Railroad. San Joaquin River Bridge completed the last link. First train over bridge, Sept. 8, 1869. State Landmark #780-7.
49	Landing Place of Sailing Launch "Comet"	Site of landing for first vessel to ascend San Joaquin River, 1846. Carried settlers.
50	San Joaquin City	Site of town. Built in 1849. Outside Legal Delta but pertinent. Riverboat terminal and site of river crossing for pioneers at Durham's Ferry.

## SIGNIFICANT DELTA HISTORIC RESOURCES

Symbol	Site	Symbol	Site
1.	Yolo County Courthouse	26.	Hastings Adobe (or Montezuma's Adobe)
2.	First Pacific Coast Salmon Cannery	27.	Pittsburgh Historical District
3.	Camp Union	28.	Mine Shafts Nortonville/Somersville, Coal Mines Regional Park
4.	Suttersville	29.	Empire Basin Area
5.	Town of Freepoint	30.	Liberty Grammar School
6.	Beach Family Home	31.	Babbe's Landing
7.	Town of Clarksburg	32.	Iron Horse School
8.	Eddinger House	33.	Murphy Home and Wallace Home
9.	Town of Courtland	34.	Coats Hall
10.	Town of Paintersville	35.	McCabe House
11.	Steamboat Slough "Dolphin"	36.	Point of Timber Trading Center
12.	Port of Maine Prairie	37.	Point of Timber Landing
13.	River Mission	38.	Geddes House
14.	Town of Locke	39.	Town of Byron
15.	Delta Meadows Archeological Site	40.	John Marsh Home
16.	Town of Walnut Grove	41.	Byron Hot Springs Hotel
17.	Ryde Hotel	42.	Vasoo Caves
18.	Benson's Ferry	43.	City of Stockton Waterfront
19.	Port of Mokelumne City	44.	First improved road in California
20.	Town of Thornton	45.	Site of Hudson Bay fur trappers encampment
21.	Town of Woodbridge	46.	Dutch Point
22.	Town of Isleton	47.	Brick silos and brick barns
23.	Grudstone Joe's	48.	First Transcontinental Railroad Linkup
24.	Beached Riverboat	49.	Landing Place of Sailing Launch "Comet"
25.	Town of Collinsville	50.	San Joaquin City



## LAND AND WATER USE AND TRANSPORTATION

### Land and Water Use

Ninety percent of the Delta is zoned for agriculture. Seventy-five percent is cultivated for field crops, vineyards, and orchards. The remaining land is in pasture, marshland, native or riparian state, or is fallow.

Other land and water uses include residential, recreation, fish and wildlife habitat, water quality protection, industrial development, and transportation.

The only commercial fishing is for crayfish. Commercial fishing for striped bass was halted in 1937, and commercial fishing for salmon was ended in 1957.

Most of the heavy industrial development is in the Antioch-Pittsburg area, Sacramento area (actually east Yolo), and Stockton areas. Industrial development includes a variety of manufacturing facilities, food packing and processing plants, utilities, mining, and natural gas drilling operations.

Utilities such as power plants, major water pumping stations, waste disposal sites, and sewage treatment plants are mostly located near population centers.

Mining operations include the sand and gravel extraction sites near Rio Vista, Byron, Tracy and Antioch; and lime extraction sites near Clarksburg and Tracy. Peat mining is near Franks Tract and Holt.

### Transportation

Transportation in the Delta is still accomplished mostly by boat, particularly in the Sacramento and San Joaquin Rivers and their respective

## LAND AND WATER USE AND TRANSPORTATION (Continued)

### Transportation (Continued)

deep water ship channels. Other transportation features are the ferries, bridges, roads and highways, railroads and airports (Figure 13).

There are 12 ferries in the Delta. The ferry system is designed primarily for auto and truck transport between the islands. Delta ferries are of two types: cabled and noncabled (operated by propeller).

Table 5

### DELTA FERRIES

#### Cable Ferry Landings

<u>Landing</u>	<u>Waterway</u>
Fay Island to Bacon Island	Old River
Mildred Island to Lower Jones Tract	Empire Cut
McDonald Tract to Lower Jones Tract	Empire Cut
McDonald Tract to Roberts Island	Turner Cut
Mandeville Island to McDonald Tract	Middle River
Venice Island to Empire Tract	Little Connection Slough
South end Liberty Island	Cache Slough
Howards Landing on Grand Island to Ryer Island	Steamboat Slough



LAND AND WATER USE AND TRANSPORTATION  
(Continued)

Transportation (Continued)

Table 5 (Continued)

Non-Cable Ferry Landings

<u>Landing</u>	<u>Waterway</u>
Empire Tract by Light No. 11	San Joaquin River
Ryer Island near mouth of Steamboat and Cache Sloughs	Cache Slough
Jersey Island to Webb Tract and Bradford	False River

The Delta has about 70 bridges in or around its periphery. The bridges are either fixed bridges or movable drawbridges. The drawbridges are of three types: swing, bascule, or vertical lift. Swing bridges swing open sideways. Bascule bridges have massive concrete counterweights that cause the bridges to open. Vertical lift drawbridges have high towers housing counterweights equal to the weight of the lift span.

Not all drawbridges are tended 24 hours a day. It is absolutely necessary to know and understand bridge schedules, tidal action, and bridge clearances in order to avoid unnecessary delays and possible accidents.

TABLE 6

DELTA DRAWBRIDGES

<u>Location</u>	<u>Type</u>	<u>Waterway</u>
Freeport	B	Sacramento River

LAND AND WATER USE AND TRANSPORTATION  
(Continued)

Transportation (Continued)

TABLE 6 (Continued)

<u>Location</u>	<u>Type</u>	<u>Waterway</u>
Paintersville	S	Sacramento River
Sutter/Grand Islands	B*	Steamboat Slough
Walnut Grove	B	Sacramento River
Walnut Grove	S	Georgiana Slough
Isleton	B	Sacramento River
Sutter/Merritt Islands	S	Sutter Slough
Ryer Island	S	Miner Slough
Pierson District	S	Snodgrass Slough
Rio Vista	L	Sacramento River
Twin Cities Road	S	Snodgrass Slough
Brannan/Sherman Islands	L	Threemile Slough
Tyler/Staten Islands	S	North Fork of Mokelumne River
Highway 12 at Andrus/Bouldin Islands	S	Mokelumne River
Highway 12 at Bouldin Island/ Terminus Tract	S	Little Potato Slough
Andrus/Tyler Islands near Isleton	S	Georgiana Slough

LAND AND WATER USE AND TRANSPORTATION  
(Continued)

Transportation (Continued)

TABLE 6 (Continued)

<u>Location</u>	<u>Type</u>	<u>Waterway</u>
Bacon/Mandeville Islands	S	Connection Slough
Bacon Island/Lower Jones Tract	S	Middle River
Middle River RR Bridge	B	Middle River
Old River RR Bridge	B	Old River
Highway 4 at Byron Tract/Victoria Island	S	Old River
Highway 4 at Victoria Island/Middle Roberts Island	S	Middle River
Highway 4 at Middle Roberts/Stockton Area	B	San Joaquin River
King Island/Bishop Tract	S	Bishop Cut
Empire Tract/King Island	S	Honker Cut

S = Swing

B = Bascule

L = Lift

A network of County, State, and Federal highway systems crosses the

LAND AND WATER USE AND TRANSPORTATION  
(Continued)

Transportation (Continued)

Delta. Some of the major roads and highways are Highways 4, 160, 12, 113 and Interstate 5. Minor connector roads include Thornton Road, Walnut Grove Road, Twin Cities Road, Eightmile Road, and Jefferson Boulevard. Most waterways are bordered by levee roads. Many of these roads are private.

The Greyhound Bus Line makes stops at Brentwood, Oakley, Rio Vista, Tracy, Pittsburg, Antioch, and Byron. Trailways provides "on call" stops once a day to Tracy.

No railway companies provide passenger service south of Sacramento in the Delta area. The major railways are the Atchison-Topeka and Santa Fe, Southern Pacific, and Sacramento Northern. Southern Pacific abandoned the Sacramento to Isleton run. All the companies make freight runs, but do not serve the Delta area.

Air transportation in the Delta is limited. There are 12 airports in or near the Delta. Five airports are public and have services: Lodi - Kingdom Airpark, Lodi - Linds, Rio Vista Municipal, Stockton Municipal, and Walnut Grove - Spezia. Public airports with no services are Franklin Field and Lodi Airport. Five are private fields for emergency use and landmark value: Clarksburg - Borges, Brentwood - Delta Air Park, Byron - Discovery Bay, Franklin - Flying "B" Ranch, and Stockton - Rough 'n Ready.



POPULATION GROWTH TRENDS AND  
FUTURE RECREATION IMPLICATIONS

Urbanization and population growth is significant to recreation planning in order to make an objective assessment of recreation participation and equitable resource allocation decisions.

The Delta's population was estimated to be about 250,000 in 1976. This figure has surely grown in the past years as evidenced by population increases of individual towns and cities in the Delta (Table 7). The Delta contains small incorporated cities including Antioch, Pittsburg, Isleton, and Rio Vista, as well as about 10 unincorporated towns and villages.

While the Delta has no major cities located in its boundaries, it is surrounded by major population centers of Sacramento, Stockton, and the San Francisco Bay Area.

Cities'/Towns' Growth Affecting  
Delta's Future

Cities within and adjacent to the Delta area are experiencing steady economic growth and population increase, except for Rio Vista and Isleton.

Rio Vista is dedicated to a slow-growth concept as evidenced in its current master plan which calls for a city population of 6,000 by the year 1990. It is the desire of the residents to keep the population down and have a healthful environment. However, it is predicted that Rio Vista could become a recreation center in view of the presence of marinas, boat dealers, and bait shops that specifically cater to the recreationist.

POPULATION GROWTH TRENDS  
AND FUTURE RECREATION IMPLICATIONS  
(Continued)

Cities'/Towns' Growth Affecting  
Delta's Future (Continued)

Isleton's growth prospects are not encouraging. Steamboats that used to be plentiful in the area no longer pass there. Canneries that used to be the largest employer closed shops years ago. Its population has remained about 900 since 1970 while neighboring communities have grown. Isleton's declining population is being blamed on the Federal Government which imposed strict building regulations on the city after it was ravaged by floods in 1972. Land speculators or developers usually do not want to develop land in areas subject to flood insurance regulations unless there is absolutely no other land available for subdivision purposes.

On the other hand, there are towns or areas in the Delta that are experiencing unparalleled economic and population growth. Bethel Island and Discovery Bay, located in eastern Contra Costa County, are growing rapidly.

Bethel Island has been growing steadily for several years because of its prime access to Delta waterways from Contra Costa County and the San Francisco Bay Area. The island is viewed as a second home for recreation purposes.

Discovery Bay started out as a second home recreation-retirement community but recently evolved into a community with more permanent residents. It is expected to become a "bedroom community" because of its close proximity to Stockton, Antioch, Pittsburg, and Tracy. Discovery Bay's population is projected to grow to 12,000.



TABLE 7

POPULATION OF SELECTED CITIES/TOWNS WITHIN OR ADJACENT  
TO THE DELTA AREA

<u>Cities/Towns</u>	<u>1960</u> <sup>1</sup>	<u>1970</u> <sup>2</sup>	<u>1980</u> <sup>3</sup>
Stockton	86,321	109,963	137,700
Sacramento	191,667	257,105	274,400
Rio Vista	2,616	3,170	3,030
Tracy	11,289	14,724	17,000
Pittsburg	19,062	21,423	31,150
Antioch	17,305	28,060	41,750
Isleton	1,039	850	930

<sup>1</sup> California Statistical Abstract, Sacramento, California, 1979.

<sup>2</sup> California Department of Finance, Population Estimates for California Cities and Counties, 1970 through 1978, Sacramento, California, Report 78 E-4, 1978.

<sup>3</sup> California Department of Finance, Population Estimates of California Cities and Counties, January 1, 1979, and January 1, 1980, Report 80 E-1, Sacramento, California, 1980.

POPULATION GROWTH TRENDS AND FUTURE  
RECREATION IMPLICATIONS  
(Continued)

Cities'/Towns' Growth Affecting  
Delta's Future. (Continued)

Known as the "Gateway to the Delta", Antioch is predicted to grow to a population of 70,000 by the turn of the century. Its waterfront could become a Delta showcase with the implementation of a downtown and waterfront development plan blending recreation, housing and business into a single area. Antioch's prospects for development are many. Its city limits could expand far beyond current perimeters, with homes and new industries reaching or passing Highway 4 and the John Nejedly Bridge. To the southeast, open fields and hillsides will give way to new residential development.

Delta Counties and Other Significant  
Counties

The population of Delta counties and other major counties with significant Delta recreation use is steadily increasing (Table 8). Considerable population increase is noticeable in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo Counties which comprise the Delta legal boundary. The only exception to the increasing population trends in the selected counties is San Francisco. San Francisco's population decreased from 740,316 in 1960 to approximately 639,300 in 1980. However, such occurrence is not surprising since the trend is the same in many big cities throughout the country. An exodus of population migration from inner city to the suburbs is occurring. People are searching for better living conditions, affordable housing areas, and healthful environments.

Population projections for the same counties in the year 1990 also

POPULATION GROWTH TRENDS AND FUTURE  
RECREATION IMPLICATIONS  
(Continued)

Delta Counties and Other Significant  
Counties (Continued)

indicate increasing trends in areas except San Francisco (Table 9). This population growth and close proximity to major population centers will undoubtedly increase use of the Delta as a recreation area.

Existing/Future County Development

Sacramento County: Sacramento is considered to be the fastest growing of the Delta counties. Its housing industry is booming. The completion of the final link of Interstate 5 between Stockton and Sacramento in 1979 created a set of growth pressures on the town of Franklin and Walnut Grove. However, despite its rapid growth, Sacramento has maintained its agricultural zoning where the City of Sacramento ended its housing plan development at the end of its housing development near Freeport.

Contra Costa County: This county is anticipating accelerated commercial growth as the population increases in the years ahead. Civic and business leaders are of the opinion that the population of Antioch, Pittsburg, and areas east of the county will continue to increase. Moderate growth is also expected in the Oakley-Brentwood area which would primarily be residential. Bethel Island and Hotchkiss Tract will continue to experience residential growth until the urban complex is filled to capacity.

San Joaquin County: The county will experience a population growth of 320,000 to 400,000 in the year 2000. The number of households also are

TABLE 8

POPULATION OF DELTA COUNTIES AND OTHER SELECTED  
COUNTIES WITH SIGNIFICANT DELTA RECREATION USE

<u>County</u>	<u>1960</u> <sup>1</sup>	<u>1970</u> <sup>2</sup>	<u>1980</u> <sup>3</sup>
Contra Costa	409,030	557,300	646,100
Sacramento	502,778	636,500	776,700
San Joaquin	249,989	292,000	325,000
Solano	134,597	172,400	227,900
Yolo	65,727	92,700	111,000
Alameda	908,209	1,072,500	1,105,600
San Francisco	740,316	712,000	639,300
San Mateo	444,387	557,100	597,000
Santa Clara	642,315	1,072,200	1,274,100

<sup>1</sup> California Department of Finance, Population Research Unit, Census Data.

<sup>2</sup> Total Population Estimates of California Counties, July 1, 1970, to July 1, 1975.

<sup>3</sup> California Department of Finance, E-150 Projection.

TABLE 9

POPULATION PROJECTIONS OF DELTA COUNTIES AND OTHER  
SELECTED COUNTIES WITH SIGNIFICANT DELTA RECREATION USE

<u>County</u>	<u>1980</u> <sup>1</sup>	<u>1985</u> <sup>1</sup>	<u>1990</u> <sup>2</sup>	<u>1995</u> <sup>2</sup>
Contra Costa	646,100	698,700	730,000	773,600
Sacramento	776,700	853,900	877,400	930,600
San Joaquin	325,000	349,700	364,900	391,200
Solano	227,900	269,300	287,100	326,200
Yolo	111,000	119,400	128,700	136,700
Alameda	1,105,600	1,140,600	1,173,800	1,203,900
San Francisco	639,300	633,100	625,500	626,900
San Mateo	597,000	620,000	640,400	653,800
Santa Clara	1,274,100	1,379,500	1,491,800	1,586,900

<sup>1</sup> California Department of Finance, Population Research Unit, E-150  
Projection.

<sup>2</sup> California Department of Finance, Population Research Unit, Report 77, P-1,  
Series E-150.



POPULATION GROWTH TRENDS AND FUTURE  
RECREATION IMPLICATIONS (Continued)

Existing/Future County Development  
(Continued)

San Joaquin County: (Continued)

expected to increase from 120,000 to 175,000. The opening of I-5 with an offramp adjacent to Thornton will increase growth pressure. Stockton has been growing rapidly with suburbs reaching into excellent farmlands north of the city and east of I-5. However, the county and city plans have put a limit line in the northern part of the city for the year 2000. Because of the Stockton growth limitation, Lodi has begun expanding into its western farmlands and vineyards.

Solano County: Solano County is on its way to industrialization. The Collinsville-Montezuma Hills Area Plan was just completed (1979) which sets aside some 29,640 acres of lands for industrial development. The plan proposes land allocations for 7,440 acres for water-dependent industry and 2,690 acres of water-dependent industrial reserves. This will replace present low-intensity agriculture. It is anticipated that future industrial development in Solano could increase its present population of 227,900 anywhere from 3,000 to 9,000 very shortly.

Recreation opportunities are also created in connection with the Collinsville-Montezuma Hills area industrial development. Approximately 450 acres of the easternmost end of the area are designated for shoreline recreation uses. On the western edge of the planning area, opportunity exists for marsh-oriented passive recreation activities. Transportation plans call for accommodation of industrial, agricultural, and recreation uses of the whole area.

POPULATION GROWTH TRENDS AND FUTURE  
RECREATION IMPLICATIONS (Continued)

Existing/Future County Development  
(Continued)

Yolo County: Yolo County is likely to remain an agricultural area and not experience unprecedented growth predicted for other Delta counties. One reason for its limited growth is due to the adverse effect of Proposition 13. Its present population of 111,000 is projected to increase to 136,700 in 1995 which is quite a minimal growth compared to other counties.

New Silicon Valley

The emergence of the new Silicon Valley, a vast electronics industry in Roseville, could have a tremendous impact on the Delta's recreation areas and facilities.

This electronics industry complex expects to generate some 10,000 jobs within 5 years and an estimated indirect employment of 50,000 jobs by 1985. It is estimated that more than 125,000 jobs will be offered within a 20-year period. In terms of population growth, Sacramento County alone expects to grow by 77,200 by 1985 to a total of 853,900, defying all previous conservative population growth projections made. The entire Sacramento region, including Yolo County, is expected to gain 111,600 new residents in the next 5 years. The total Sacramento region population will be 1.12 million, amounting to approximately 12 percent increase from the 1980 population figures.

Unprecedented increase in population growth in Roseville, including Placer and Sacramento Counties, would require thousands of acres of lands for residential, commercial, school, road, and industrial development purposes. Setting aside adequate recreation lands for development would be required.

POPULATION GROWTH TRENDS AND FUTURE  
RECREATION IMPLICATIONS (Continued)

Recreation Implications

Population growth, changing life styles, energy crisis, innovative recreation activities and equipment, increased disposable income, population age structure, technology, and politics are some of the factors that will determine present and future trends and patterns of recreation participation using diversified recreation areas.

If the cost of gasoline continues to rise, social and economic pressures to curtail use of energy for various recreation purposes will become inevitable. Less people will travel long distances to resource-based recreation areas. User-oriented recreation

POPULATION GROWTH TRENDS AND FUTURE  
RECREATION IMPLICATIONS (Continued)

Recreation Implications (Continued)

areas close to population centers are likely to be heavily used because of minimal gasoline consumption required to travel to and from them.

Population and economic growth in all Delta counties is indicative of the need for more recreation areas and facilities in the Delta area. In these years of continued inflation and energy crunch, user-oriented recreation areas such as the Delta are certainly going to cater to the recreation needs of urban residents. The Delta should be efficiently and effectively planned to be able to allocate its limited resources equitably for all its uses.





RECREATION USE





The Delta Outdoor Recreation Survey (DORS), March 1980, was conducted from June 1977 to April 1979. Both visitors and residents of the Delta were surveyed.

The visitor sample was obtained from a vehicular survey of intrastate, noncommercial vehicles leaving the Delta from August 1977 through August 1978. License plate numbers were recorded at 35 sites dispersed along the boundaries of the study area. Recorded license plate numbers were then checked with the Department of Motor Vehicles for owners' addresses. Owners were sent questionnaires and asked to complete them. A total of 13,455 questionnaires were sent to visitors. Of the 7,712 questionnaires returned, 3,478 visitors indicated they recreated in the Delta.

The resident sample was obtained via home interviews from June 1977 to April 1979. From a 455 sample size, 273 residents indicated they recreated in the Delta.

The planning area was divided into nine GENERAL AREAS AND BORDERING WATERWAYS (see Figures 14 and 15 and Appendix A). Recreation use responses of visitors and residents were categorized within the nine separate general areas and waterways.

In the survey report, visitor and resident data were analyzed and presented separately. For purposes of this phase of recreation planning, user origin was irrelevant. Therefore, most of the visitor and resident data was combined to produce an overall picture of Delta recreationists and recreation use. In some cases, it was impossible to combine visitor and resident data because of the nature of the questions asked.

The following highlights results of the DORS (refer to Appendices C through K for detailed statistics):

#### Demographic Characteristics

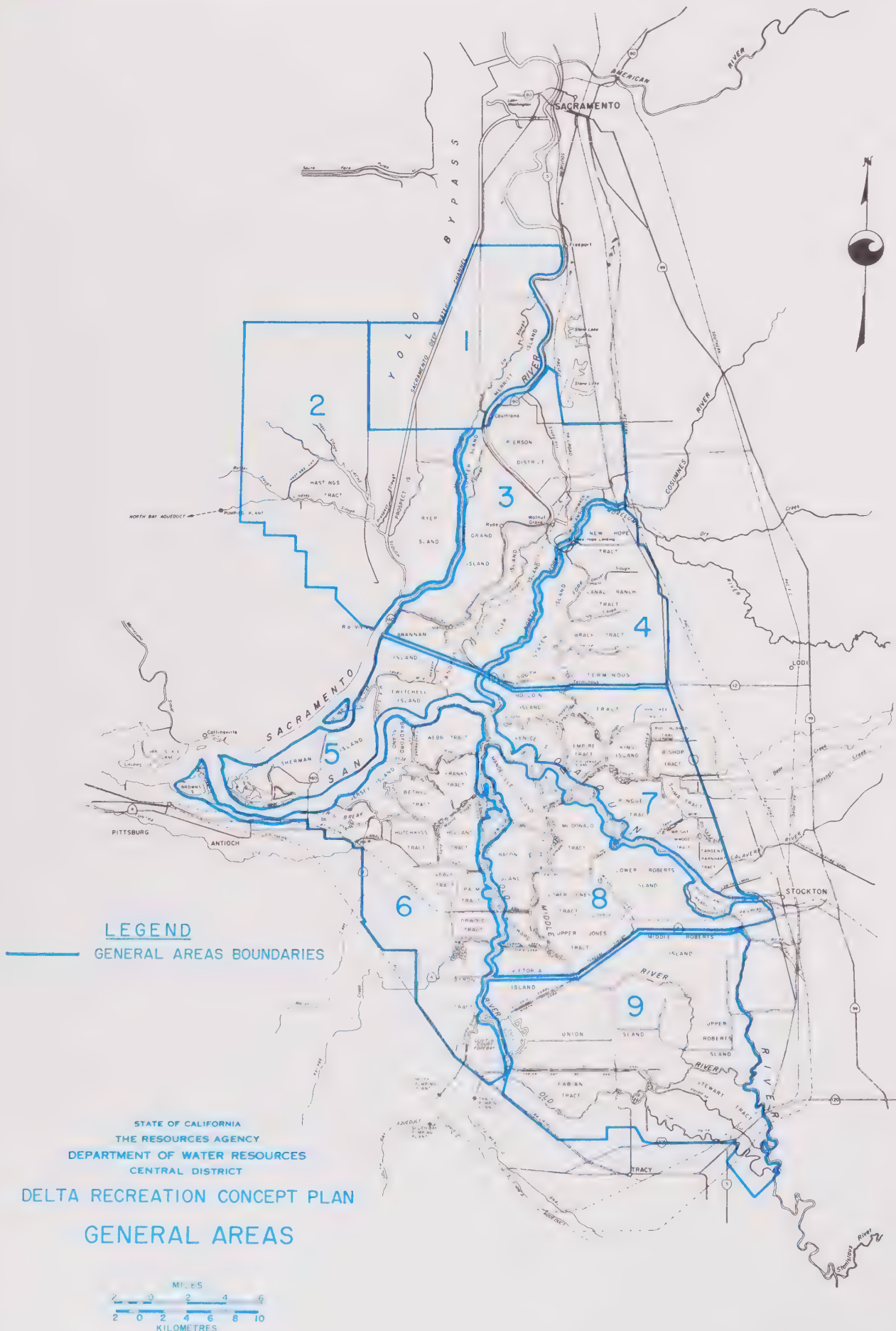
- \* The majority of recreationists were males
- \* 1/5 were between the ages of 25 and 34 years and another 1/5 were between 50 and 59 years old
- \* Almost 3/4 were married
- \* Over 1/2 came from average household sizes of 2-3 people
- \* Approximately 70% were employed full time
- \* Recreationists' education:
  - 39% attended high school
  - 39% attended college
  - 13% earned advanced degrees
- \* Household incomes:
  - 33% of household incomes fell between \$15,000 and \$24,999
  - 19% of recreationists had household incomes over \$30,000
- \* Over 1/2 had weekends off

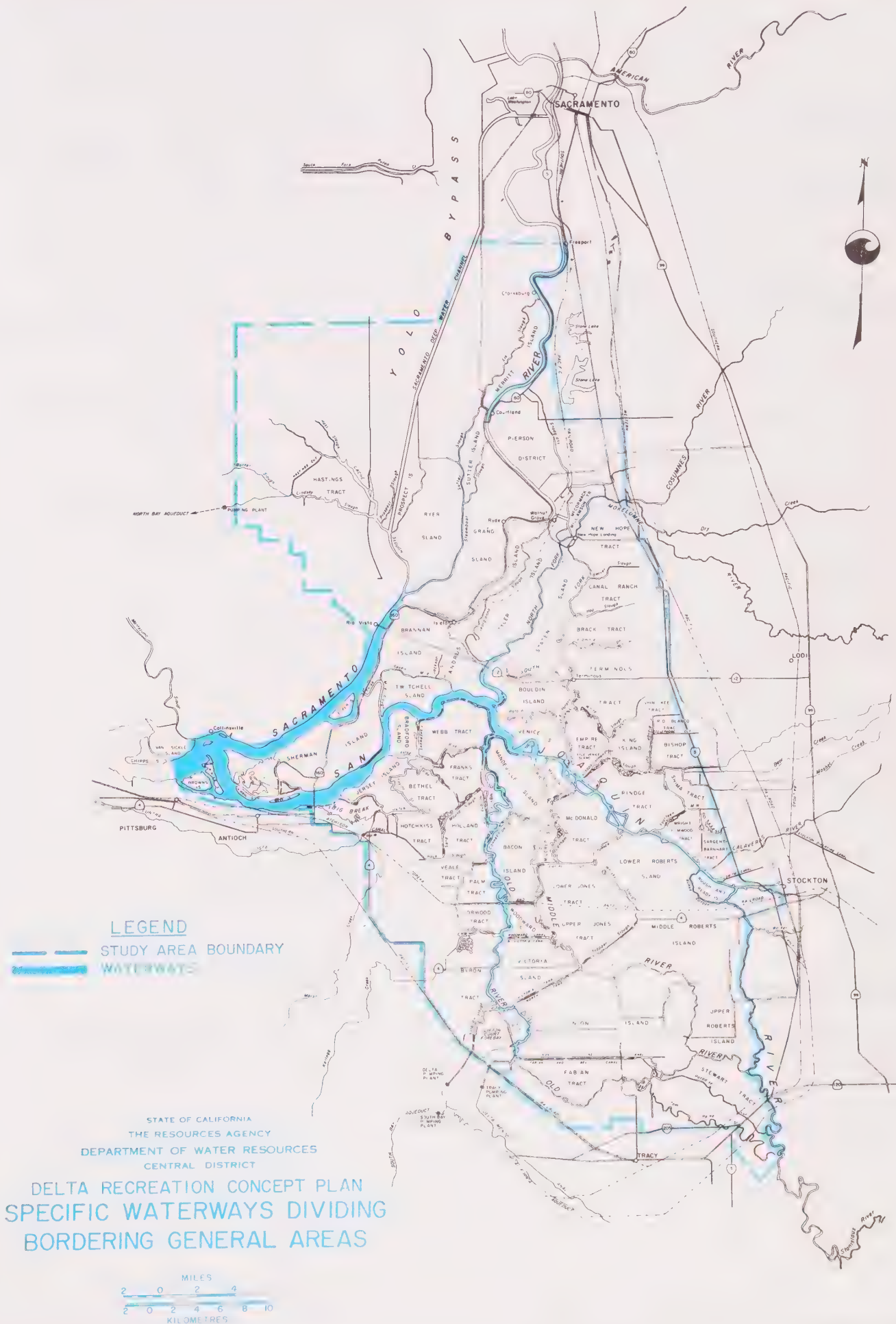
#### Recreation Experience Characteristics

##### Visitors:

- \* Majority stayed one day or less
- \* Majority were from the greater San Francisco Bay Area

FIGURE 14







## RECREATION USE (Continued)

### Recreation Experience Characteristics (Continued)

- \* 93% came from northern California metropolitan areas
- \* 33% were from Contra Costa County
- \* 16% were from San Joaquin and Sacramento Counties, respectively
- \* Most traveled an average of less than 50 miles one way to the Delta
- \* Group expenditures averaged \$48
- \* Most were in a family-related group
- \* Average recreation group size was 5.23

#### Residents:

- \* Over 3/4 were from Sacramento and Contra Costa Counties
- \* Group expenditures averaged \$37
- \* 64 % were in a family group
- \* Average group size was 12.5
- \* Over 80% lived in Delta 12 months out of a year
- \* Recreated approximately 95 days a year

### Recreation Activities

- \* Motorboating and fishing were the most popular recreation activities and other popular activities included relaxing, driving for pleasure, and sightseeing (see Figure 16).

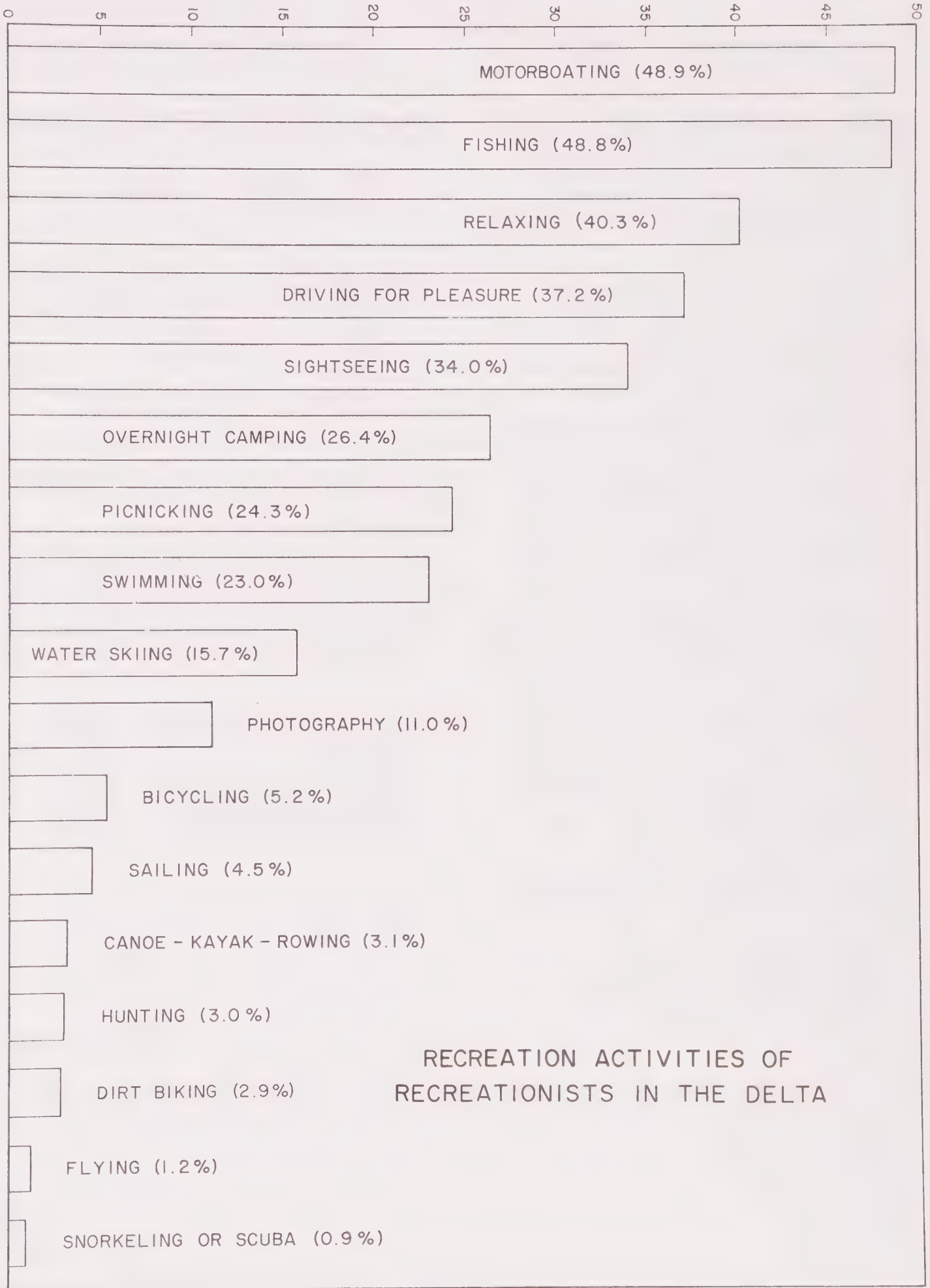
## RECREATION USE (Continued)

### Recreation Activities (Continued)

See 'Recreation Activity' tables in area sections 1 through 9 for the following information:

- \* The highest number of recreation activities occurred in Area 6: 5,612
- Motorboating accounted for almost 1/5 of recreation activities in Area 6
- Fishing, relaxing, overnight camping and swimming were other popular activities in Area 6
- The next highest number of recreation activities occurred in Area 3: 2,993. The popular activities were:
  - fishing
  - motorboating
  - relaxing
  - driving for pleasure
  - sightseeing
- \* Area 5's recreation activities numbered 2,113. Most popular activities:
  - fishing
  - relaxing
  - motorboating
  - overnight camping
- \* More recreationists fished for catfish and striped bass than any other type of fish

- \* Recreationists camped overnight onshore as much as they did on a boat



## RECREATION USE (Continued)

### Recreation Activities (Continued)

- \* Most recreationists' boats were between 14 and 19 feet in length
- \* Most commonly used boats were ski boats and cruisers
- \* Majority of boats used were owned by someone in the group
- \* Recreation use by activity and season:
  - Summer had the highest recreation use
  - summer: 6,253 recreation-activity use
  - spring: 3,061 recreation-activity use
  - fall: 1,829 recreation-activity use
  - winter: 1,350 recreation-activity use
- \* Motorboating and fishing were the most popular activities throughout the year, but occurred more frequently during the summer.

### Why and Where People Recreated in the Delta

- \* Almost 13 percent of recreationists indicated they would not visit any other alternative recreation area if the Delta were unavailable to them.

## RECREATION USE (Continued)

### Why and Where People Recreated in the Delta (Continued)

- Other alternatives most often mentioned were:
  - A city or town
  - the ocean
  - the San Francisco Bay Area
  - "other" lake (a specified lake not listed on code sheet)
  - a lake (lakes in general)
  - Lake Berryessa
  - Clear Lake
- 21% visited the Delta instead of an alternative location because it was convenient/close at hand.
- \* Over 1/4 considered the Delta a good place for outdoor recreation because of fishing and atmosphere; other reasons included water, convenience/ closeness, facilities in general, specifically boat launching facilities, and a variety of individual activities.
- \* Almost 30% had no gripes about the places they used for outdoor recreation; those who did have gripes complained about crowded conditions, dirty water/debris, speed boating conflicts, the atmosphere, littering, inadequate service, parking, boating facilities, etc.
- \* Almost 1/2 said their future use of the Delta would remain the same; 43% said their use would increase, while only 5% said their use would decrease.

## RECREATION USE (Continued)

### Why and Where People Recreated in the Delta (Continued)

See 'Recreation Use' figures and tables in Area Sections 1 through 9\* for the following information:

\* Almost 80% recreated in the GENERAL AREAS. More recreation occurred in Area 6 (27%), Area 3 (16%) and Area 5 (10%)

\* The most frequently visited locations within each of the above mentioned areas were as follows:

AREA 6: Bethel Island (8%), Franks Tract (8%), Piper and Taylor Sloughs (5%), and Sand Mound Slough (3%)

AREA 3: Sacramento River from Locke to the confluence of Cache Slough and Steamboat Slough (5%), Sacramento River from Courtland to Locke (4%), Brannan Island - North (3%), and Walnut Grove (2%)

AREA 5: Brannan Island - South (4%), Sherman Island (2%), Sevenmile Slough (2%), and Threemile Slough (2%)

\* Over 1/5 recreated in SPECIFIC WATERWAYS DIVIDING/BORDERING GENERAL AREAS. The most popular waterways were:

Sacramento River from Cache Slough south to Collinsville, including Horseshoe Bend (11%)

\* 'Recreation Use' tables in Area Sections 1 through 9 present where recreation occurred in the Delta. Base data was obtained from DORS, March 1980, Tables 37A and 37B, Where Groups Recreated.

Total number of recreationists at specific locations was required for this report (not Groups as in Tables 37A and 37B, DORS) and was calculated by multiplying the number of group visits to each location by the average group size of visitors (5.23) or residents (12.5), respectively. Total number of recreationists at specific locations was arrived at by adding visitor and resident data.

## RECREATION USE (Continued)

### Why and Where People Recreated in the Delta (Continued)

San Joaquin River and Stockton Deep Water Channel from the Mokelumne River to Highway 4, including Burns Cutoff (5%)

Steamboat Slough from Sutter Slough south (3%)

Sacramento River from Clarksburg south to Courtland (3%)

### Estimation of Total Recreation Use of Delta

\* 10,647,883 recreation days were contributed by visitors

\* 1,247,501 recreation days were contributed by residents

\* 11,895,384 total recreation days for the 1977-78 period

### Estimation of Total Recreation Days by Delta Location

Visitors:

\* AREA 6 had the highest number of visitor recreation days: 1,980,506

\* AREA 3 had the next highest number of visitor recreation days: 1,043,492



## RECREATION USE (Continued)

### Estimation of Total Recreation Days by Delta Location (Continued)

\* Visitors spent 2,150,872 recreation  
days on Delta waterways

Residents:

\* AREA 6 had the highest number of  
resident recreation days: 319,360

\* AREA 3 had the next highest number of  
resident recreation days: 233,282

\* Residents spent 185,827 recreation  
days on Delta waterways

### Forecasts of Future Recreation Use in the Delta Area

\* Total number of recreation days  
forecast for 1985: 12,883,095

\* Total number of recreation days  
forecast for 1990: 13,607,890



## RECREATION INVENTORY



## RECREATION INVENTORY

A detailed inventory was made of the following:

- \* EXISTING COMMERCIAL RECREATION FACILITIES: Owned and operated by private individuals, available to the public
- \* EXISTING PUBLIC RECREATION FACILITIES: Government affiliated (state or county)
- \* PRIVATE RECREATION ASSOCIATIONS: Membership only and closed to the general public
- \* PROPOSED COMMERCIAL RECREATION FACILITIES
- \* PROPOSED PUBLIC RECREATION FACILITIES

### EXISTING COMMERCIAL RECREATION FACILITIES

The inventory of existing commercial recreation facilities was conducted by telephone and on-site visits with managers/owners. There are 116 commercial recreation facilities in the Delta:

- 107 commercial marinas
- 3 commercial restaurants with guest docks
- one retail store with guest docks
- one commercial community development
- one commercial boatyard
- one trailer court with berths
- one RV park
- one community dock

Figures and detailed inventories are located in Area Sections 1 through 9.

## RECREATION INVENTORY (Continued)

Tables 10 through 26 reflect the names and distribution of facilities and services. The following highlights the inventory of commercial recreation facilities:

### Berths

- 8,534 total berths (6,453 covered; 2,081 open).
- AREA 6 has highest number of berths (2,349) and highest number of commercial recreation facilities
- AREA 7 has the next highest number of berths and also the highest number of berths in proportion to the number of commercial recreation facilities (9:1,867)

### Docks

- 119 total docks (11 day-use docking; 104 day-use and/or overnight docking, and 4 gas docks which accommodate overnight docking)
- AREA 6 has highest number of docking facilities (49)

### Dry Storage

- 2,153 total dry storage spaces (1,377 open; 796 covered)
- AREA 6 has the most dry storage spaces (1,080).

### Launch Facilities

- 23% have launch ramps
- AREA 6 has the highest number of launch ramps and lanes (7 ramps/12 lanes)
- 16% have mechanical launches; AREA 6 has the most mechanical launches (10)



TABLE 10

## COMMERCIAL FACILITIES: BERTHS

Area	:	Number	:	Number of Berths		
	:	Commercial	:			
	:	Recreation	:	Covered	:	Open
	:	Facilities by Area:	:	:	:	Total
1		4		207		102
2		5		130		63
3		13		694		158
4		2				120
5		20		1,065		537
6		48		2,349		691
7		9		1,543		324
8		10		338		37
9		5		127		49
Total		116		6,453		2,081
						8,534

TABLE 11  
COMMERCIAL FACILITIES: DOCKS

Area	:Number of :	Number of Docks			:
	:Commercial:				:
	:Recreation:	Gas Docks	:Day-use:	Day-Use	:Total
	:Facilities:	Accommodating	:Docking:	And/Or	:
	: By Area	:Overnight Docking:	Only	:Overnight Docking:	
1	4			6	6
2	5			9	9
3	13		1	12	13
4	2		1	1	2
5	20	2	4	17	23
6	48		2	47	49
7	9	1		5	6
8	10	1	2	4	7
9	5		1	3	4
Total	116	4	11	104	119

TABLE 12

## COMMERCIAL FACILITIES: DRY STORAGE

Area	:Number of : :Commercial: :Recreation: :Facilities: : By Area :	: Open Dry Storage : Number : of : Spaces :	: Other : :	: Covered Dry Storage : Number : of : Spaces :	: Other : :	: Total Dry Storage Spaces :
1	4	30				30
2	5	35				35
3	13			115		115
4	2					
5	20	77	3 acres	54		131
6	48	775	3 acres $\frac{1}{4}$ mile long +70' wide	305		1,080
7	9	420		302		722
8	10	20				20
9	5	20				20
Total	116	1,377	6 acres $\frac{1}{4}$ mile long +70' wide	776		2,153

TABLE 13

## COMMERCIAL FACILITIES: LAUNCH FACILITIES

Area	:Number of : :Commercial: :Recreation: :Facilities: : By Area :	: Number of Launch Ramps	: Number of Launch Lanes	: Number of Mechancial Launch
1	4	1	1	1
2	5	1	1	
3	13	4	7	1
4	2	2	3	
5	20	5	7	2
6	48	7	12	10
7	9	2	2	3
8	10	3	4	
9	5	2	4	1
Total	116	27	41	18



## RECREATION INVENTORY (Continued)

### Dry Dock

- Total of 13 (11%) have dry dock service
- AREA 6 has the most dry dock facilities (54 spaces)

### Boat Engine/Hull Maintenance

- 16% have engine and hull maintenance service
- 12% have engine maintenance service
- 2% have hull maintenance service
- AREA 6 has the most engine and hull, engine or hull maintenance service (14 commercial facilities)

### Campsites

- 2,061 total car/RV/tent campsites
- 255 total tent campsites
- 236 total trailer/RV campsites
- 161 unspecified campsites
- AREA 6 has the most campsites (1,206 car/RV/tents; 151 trailer/RV; 90 unspecified type)

### Picnic Areas/Facilities

- 298 total tables
- 50 total barbecues
- 32 picnic sites
- 27 picnic areas
- 4 picnic areas in campgrounds
- 2 tables on docks
- 1 table on levees
- AREA 6 has the most tables (111) and picnic areas (12)
- AREA 5 has the most barbecues

## RECREATION INVENTORY (Continued)

### Rentals

- 140 total houseboats; AREA 7 rents the most houseboats (84)
- 117 total fishing boats; AREA 7 rents the most fishing boats (44)
- 25 total ski boats; AREA 7 rents the most ski boats (22)
- Only AREA 3 rents rowboats (8), and dinghys (5) and jetskis (2)
- Only AREA 7 rents barges (15), patio boats (2), and canoes (6)
- 6 facilities rent ski equipment and 4 rent fishing equipment
- 32 total cabins for rent; 23 in AREA 3 and 9 in AREA 6

### Fuel

- 45% sell gas and oil (2 facilities have fuel for houseboat rentals only)
- 14% sell gas/oil, and diesel
- Only 2% sell oil only
- Most gas, oil and diesel are sold in AREA 6 (21)

### Supplies

- 66% sell ice
- 25% sell propane
- 10% sell bait
- 33% sell bait/tackle
- Over 25% sell marine supplies

TABLE 14

## COMMERCIAL FACILITIES: DRY DOCK

Area	: Number of Commercial : Recreation Facilities : By Area	: Number of Commercial : Recreation Facilities : that have Dry Dock
1	4	
2	5	
3	13	1
4	2	
5	20	3
6	48	6
7	9	3
8	10	
9	5	
Total	116	13

TABLE 15

## COMMERCIAL FACILITIES: BOAT ENGINE/HULL MAINTENANCE

Area	Number of Facilities That Have:				Total
	:Commercial:	: Engine and Hull Maintenance:			
	:Recreation:	:Hull Maintenance:	:Engine Maintenance:	:Hull Maintenance:	
	:Facilities:	:By Area	:Maintenance:	:Maintenance:	
1	4				
2	5				
3	13	3	2		5
4	2				
5	20	5	1		6
6	48	8*	4	2	14
7	9	3	3**		6
8	10				
9	5				
Total	116	19	10	2	31

\*For boat sales only

\*\*For marina's houseboat rentals only

TABLE 16

## COMMERCIAL FACILITIES: CAMPSITES

		Campsites			
:Number of : :Commercial:					
Area:	Recreation:	Number of :	Number of :	Number of :	Number of
		Facilities:	Car/RV/Tent:	Trailer/RV:	Unspecified
: By Area :		Spaces :	Tent Spaces :	Spaces :	Type Spaces
1	4				
2	5	8	40	4	25
3	13	15	40		24
4	2	42			
5	20	335	25	41	10
6	48	1,206		151	90
7	9	250			
8	10	160	Unspecified Number		12
9	5	45	150	40	
Total	116	2,061	255	236	161



TABLE 17

## COMMERCIAL FACILITIES: PICNIC AREAS/FACILITIES

Area:	:Number of : :Commercial: Number: Number : :Facilities: Tables: Barbecues:			Location				
	: of : of : : By Area : :			On : : Docks:	On : : Levees:	Picnic: : Sites :	Picnic: : Area :	Area in : Camp- : grounds
1	4							
2	5	21	2				2	
3	13	12					2	
4	2	4					1	
5	20	47	32			25	4	2
6	48	111	13			7	12	2
7	9	23	3	1	1		2	
8	10	75		1			3	
9	5	5					1	
Total	116	298	50	2	1	32	27	4

TABLE 18

## COMMERCIAL FACILITIES: RENTALS

Area	Number and Type of Rentals												
	Number of : Commercial: Recreation: Facilities: By Area :	Houseboats	Fishing: Boats	Ski Boats	Row Boats	Dinghys	Barges	Patio Boats	Canoes	Jet Skis	Ski Equipment	Fishing Equipment	Cabins
1	4	5	✓										
2	5												
3	13	21	4	3	8	5				2	✓✓		23
4	2	8	8								✓	✓	
5	20		30 ✓										
6	48	22	17								✓✓	✓	9
7	9	84	44	22			15	2 ✓	6			✓	
8	10		14 ✓										
9	5										✓	✓	
Total	116	140	117 3 ✓	25	8	5	15	2 1✓	6	2	6✓	4✓	32

✓ = Undetermined amount; represents number of commercial recreation facilities that rent this equipment.

TABLE 19  
COMMERCIAL FACILITIES: FUEL

Area	:Number of :	Number of Facilities that Sell:			
	:Commercial:				
	:Recreation:	:	:	:	:
	:Facilities:	Oil	Gas/Oil	Gas/Oil/Diesel	
	: By Area :	:	:	:	
1	4		2	1	
2	5		2	1	
3	13		6	2	
4	2		2		
5	20		8	2	
6	48	1	21 <sup>*</sup>	4	
7	9		3	4	
8	10		6	1	
9	5	1	2	1	
Total	116	2	52 <sup>*</sup>	16	

\*Two facilities sell gas/oil for houseboat rentals only.

TABLE 20

## COMMERCIAL FACILITIES: SUPPLIES

Area	:Number of :	Number of					:
	:Commercial:	Commercial Recreation Facilities					:
	:Recreation:	That Offer Supplies					:
	:Facilities:	Ice	Propane	Bait	Bait and	Marine	:
	: By Area :				Tackle	Supplies:	Other
1	4	4	2		4	2	
2	5	4	2	2			
3	13	11	3	1	4	3	
4	2	2	2		1	2	
5	20	17	3	4	7	6	
6	48	20	7	2	11	10	
7	9	8	7		6	7	Ski and fish equipment sales
8	10	6	3	2	5		
9	5	4	2	1	3	2	
Total	116	76	31	12	41	32	



## RECREATION INVENTORY (Continued)

### Boat Sales

- 17% sell boats
- More commercial facilities in AREA 6 sell boats (7)

### Food/Beverages

- 22% sell groceries
- 25% have snack bars
- 31% have restaurants
- 16% have cocktail lounges
- 19% have beer bars
- Only 7% sell take-out liquor
- 16% sell take-out beer
- 13% sell take-out beer/wine

### Trailer/Mobile Home Sites

- 151 total sites
- AREA 5 has the highest number of trailer or mobile home sites (101)

### Sanitary Facilities

- 18% have restrooms (no showers)
- 53% have restrooms & showers
- 18% have laundromats; AREA 6 has the most laundromats (7)
- 16% have pumpout stations; AREAS 5 and 6 have the most pumpout stations (5 each)

### Parking

- Almost 8,000 parking spaces are available for vehicles (4,425 paved; 3,378 unpaved)

## RECREATION INVENTORY (Continued)

### Parking (Continued)

- Over 1,000 parking spaces are available for vehicles/boat-trailers
- almost 100 acres of unpaved parking is available

### Expansion Plans

Most common expansion plans are:

- Berths
- RV camping
- Camping areas
- Dry storage
- AREAS 6 and 7 have more plans for expansion; the most common plans for expansion are for more berths and dry storage spaces

### EXISTING PUBLIC RECREATION FACILITIES

There are 22 public recreation facilities in the Delta (see Table 27):

- 9 fishing access sites
- 11 parks and recreation areas
- two boat launch ramps/parks or areas

Figures and detailed inventories are located in Area Sections 1 through 9.

### PRIVATE RECREATION ASSOCIATIONS

A detailed inventory was not conducted because private recreation associations are not open to the public (see Figure 17 for names and locations).

TABLE 21  
COMMERCIAL FACILITIES: BOAT SALES

Area	: Number of Commerical : : Recreation Facilities : : By Area :	: Number of Commercial : : Recreation Facilities : : That Have Boat Sales
1	4	
2	5	
3	13	2
4	2	1
5	20	3
6	48	7
7	9	5
8	10	
9	5	1
Total	116	19

TABLE 22

## COMMERCIAL FACILITIES: FOOD/BEVERAGES

Area	Number of Commercial Recreation Facilities That Offer Food/Beverages									
	:Number of : :Commercial: :Recreation:		:							Take Out
	:Facilities:		:							
	: By Area :	Groceries:	Snacks:	Snack:Bar	Beer:Bar	Restau-rant	:Cocktail: : Lounge :	Liquor	Beer	Beer & Wine
1	4	1		2		2			2	2
2	5			3		3	1	1	1	2
3	13	3		6	3	5	3	1	5	1
4	2	2	1	2		1	1			
5	20	5		4	2	9	7	2	4	5
6	48	5		4	3	8	2		5	5
7	9	5	1	4	3	2	2	3		
8	10	2	1	2	7	4	2	1	1	
9	5	3		2	3	2				
Total	116	26	3	29	21	36	18	8	18	15

TABLE 23

## COMMERCIAL FACILITIES: TRAILER/MOBILE HOME SITES

Area	: Number of Commercial : : Recreation Facilities : : By Area :	Number of Trailer/Mobile Home Spaces
1	4	28
2	5	
3	13	
4	2	
5	20	101
6	48	22
7	9	
8	10	
9	5	
Total	116	151



TABLE 24

## COMMERCIAL FACILITIES: SANITARY FACILITIES

Area	Number of Commercial Recreation Facilities That Have Sanitary Facilities				
	:Number of : :Commercial: :Recreation: :Facilities: : By Area :	Restrooms	:Restrooms/ : Showers :	: Laundromat :	: Pumpout : Stations
1	4	3	1		1
2	5	1	3	1	
3	13	1	7	2	2
4	2		2	1	1
5	20	3	12	6	5
6	48	7	29	7	4
7	9	3	3	1	5
8	10	1	3	1	0
9	5	2	2	2	1*
Total	116	21	62	21	19

\*Special Arrangement Only.

TABLE 25

## COMMERCIAL FACILITIES: PARKING

Area	:Number of : :Commercial: :Recreation: :Facilities: : By Area :	: Number of Vehicle : Parking Spaces : : Paved: : Unpaved: : Total :	:No. of Vehicle and Boat-: :Trailer Parking Spaces : : Paved: : Unpaved: : Total :	: Areas : : of : : Unpaved: : Parking :	: Miscel- : laneous
1	4	155 232 387			
2	5	87 146 233			
3	13	920 124 1,044	20 20	5	$\frac{1}{4}$ mile paved
4	2	20 20			$\frac{1}{4}$ mile paved
5	20	1,218 785 2,003		36	$\frac{1}{2}$ acre partially paved
6	48	513 1,296 1,809	80 402 482	53	2 unpaved parking lot $\frac{1}{2}$ mile unpaved
7	9	1,500 520 2,020	25 30 55		Lg. grass area for parking
8	10	255 255	106 100 206		
9	5	32 32	250 250	2	
Total	116	4,425 3,378 7,803	211 802 1,013	96	

TABLE 26

## COMMERCIAL FACILITIES: EXPANSION PLANS

Area	:Number of : :Commercial: :Recreation: :Facilities: : By Area :	Number of Commercial : Recreation Facilities: With Expansion Plans : :	Expansion Plans
1	4	1	Remodel
2	5	1 1 1 1	Berthing RV Camping Camping Area Recreation Area
3	13	1 1	Berthing Restaurant
5	20	2 2 2 1	Berthing RV Camping Camping Area Remodel: Add Dining Room Clubhouse Barbecue
		1 1	Laundromat Beer/Liquor License
6	48	5 4 2 3 2 3 2 2 3 1 1 1 1 1 1 1 1	Berthing Dry Storage Camping Area Launch Ramps Remodel Repair Shop Docks Pumpout Station Boat Sales Hoist Grocery Store 18-hole Golf Course Barbecue Pit,Picnic Tables Fuel Dock Coffee Shop Paved Parking Trailer Court
7	9	1 2	Dry Storage Restaurant
8	10	3 1 2	Berthing Dry Storage Camping Area
9	5	1	Dry Storage Camping Area

Table 27

## Existing Public Recreation Facilities

Area	Facilities
1	Clarksburg Fishing Access
3	Hogback Island Fishing Access
3	Cliff House Fishing Access
3	Georgiana Slough Fishing Access
5	Rio Vista Riverbank/Pier
5	Rio Vista Public Launch Ramp
5	Rio Vista Sandy Beach Park
5	Brannan Island State Recreation Area
5	Lower Sherman Island Fishing Access
6	Franks Tract State Recreation Area
6	Antioch Fishing Pier
6	Antioch Pier Park
7	Borrow Ponds
7	Oak Grove County Park
7	Buckley Cove Park Marina
7	Fritz Grupe Park
8	Mandeville Tip Park
8	South Spud Island Park
8	Channel I-5 Boat Ramp Park
8	Louis Park
9	Dos Reis County Park
9	Mosssdale Crossing Park



FIGURE 17

## PROPOSED COMMERCIAL RECREATION FACILITIES

There are 5 proposed commercial recreation facilities in the Delta:

- AREA 5: Collinsville Marina
- AREA 6: Marine De Playa  
Prince Harbor  
Discovery Bay Marina and  
Golf Course

See Area Sections 1 through 9 for descriptions.

## PROPOSED PUBLIC RECREATION FACILITIES

Presently, there are only 4 proposed public recreation facilities/areas:

- AREA 3: Delta Meadows
- AREA 4: Westgate Landing Park  
Project
- AREA 6: Browns Island
- AREA 8: Roberts Island Recreation  
Area

Detailed inventories are located in Area Sections 1 through 9.





# POTENTIAL PUBLIC RECREATION SITE SELECTION





POTENTIAL PUBLIC RECREATION SITE  
SELECTION

The process of identifying potential public recreation sites was accomplished by reviewing:

- recommendations of concerned public agencies
- past Delta studies and plans
- the current inventory of recreation presently offered to the public

The final analysis was instrumental in identifying recreation deficiencies present in the Delta.

The DWR Delta Master Recreation Plan, September 1976, DWR Bulletin 192, Plan for Improvement of the Delta Levees, May 1975, ACOE Sacramento-San Joaquin Delta Investigation, July 1979, Delta Advisory Planning Council, Delta Action Plan, July 1976, and this report's inventory of recreation facilities identified the following recreation deficiencies:

- public access
- picnic facilities
- campsites
- fishing access sites
- swimming beaches
- launch ramps
- boater destination areas
- guest docks/day use and overnight
- cultural (historic and archeological) interpretive services
- trails
- nature preserves
- hunting areas

POTENTIAL PUBLIC RECREATION SITE  
SELECTION (Continued)

- parking areas
- sanitation facilities (restrooms/pumpout stations)
- trash receptacles

The above list clearly illustrates a definite lack of facilities to support land-based recreation activities. Efforts were directed toward selecting potential public recreation areas and facilities that meet these major deficiencies.

The following criteria was used for selecting each potential public recreation site:

- Waterways Use Program (Description of Waterways Use Program appears in Appendix B and is illustrated in Existing and Potential Recreation Figures 22, 25, 28, 31, 35, 39, 42, 45 and 48.)
- public road access
- existing recreation areas/facilities/services open to public in vicinity
- limit competition with private enterprise
- identification of where people recreated (DORS)
- activity statistics by area
- complaints from Delta recreationists identifying recreation facility deficiencies
- location of industrialized traffic on waterways

POTENTIAL PUBLIC RECREATION SITE  
SELECTION (Continued)

-- natural features:

- flooding
- channel width & depth
- wind action
- earthquake faults
- soil structure
- natural gas station
- areas near industry
- rare or endangered species
- historic or archeological site

In addition to the criteria, the following was also considered in providing a basis in selecting potential public recreation sites:

- site selection should identify a variety and large quantity of potential sites of which to choose from when selecting the final master plan
- site selection would not be limited to nonproject levees only, nor was levee rehabilitation design considered since a levee rehabilitation plan had not been selected at the time this report was completed
- recreation development should emphasize the types of recreation activities that complement rather than duplicate those already available in the local vicinity
- potential public recreation sites should be accessible to the physically handicapped
- recreation sites should be located in areas that people already use for fishing access
- proposed recreation developments should not interfere with key wildlife areas, where public recreation use would be incompatible with fish and wildlife requirements

POTENTIAL PUBLIC RECREATION SITE  
SELECTION (Continued)

-- in some instances, potential public recreation sites could be situated on dredged disposal sites resulting from deepening ship channels

-- most land identified for recreation development is shoreline property, minimizing development of productive agricultural land

-- potential recreation sites should be dispersed throughout the Delta

-- relation of recreation sites adjacent to the study area was considered

-- proposed sites would be considered as potential sites

For each potential site proposed, various activities were analyzed in terms of compatibility with each other. For example, companion non-fishing activities usually include picnicking, sunbathing and camping in RV's.

Fifty-six potential public recreation sites were identified (see Figure 18):

- 23 recreation areas and parks
- 18 fishing access sites
- 4 boater destination sites and areas (Channel Islands Project is counted as one area)
- 10 nature preserves/fish and wildlife areas/conservation areas
- one historic site

Potential public recreation sites and existing public recreation sites have been combined on figures located in Area Sections 1 through 9 in order to illustrate the spacial relationships

POTENTIAL PUBLIC RECREATION SITE  
SELECTION (Continued)

and distributions of the sites to one another

A list of these potential sites and their respective support activities are also included in Area Sections 1 through 9.

POTENTIAL TRAILS

The Delta has a great potential for a developed trail system, particularly if the levees are rehabilitated. Out of the total 1,100 miles of levees, approximately 900 miles of nonproject and direct agreement levees could be rehabilitated. The final selection of potential trails (location and type), ultimately depends on the levee rehabilitation design.

The following was considered when selecting potential trails (see Figure 19):

- trail selection was not confined to nonproject levees only
- every existing Delta public road can be used for on-road bicycling. However, heavy traffic, narrow road widths, and lack of shoulders make most public roads extremely dangerous for bicycling. In the event roads are widened, bicycle trails/lanes should be provided.
- potential trail development should connect with existing public on-road trails or any other proposed trail system in and adjacent to the Delta
- recreation sites in and adjacent to the Delta should be connected by trails, when applicable
- conceivably, rehabilitated nonproject levees have potential for hiking/biking/equestrian trail construction

POTENTIAL INTERPRETIVE SERVICES  
(Continued)

- abandoned railroad rights of way could be converted to trails
- staging areas for trails should be located near public roads, and/or be incorporated in plans for other recreation developments

POTENTIAL INTERPRETIVE SERVICES

The Delta's colorful history and rich natural resources makes it an ideal candidate for interpretive services. Interpretive services relate the cultural or natural phenomena of an area to visitors (see Figures 11 and 12).

Interpretation can accomplish 3 main objectives:

- help the visitor develop an awareness, appreciation, and understanding of an area
- accomplish management goals by encouraging thoughtful use of the recreation resource, and reduce human impact on the resource by directing people to less sensitive areas that can withstand heavier use
- promote public awareness of an agency and its programs

A wide variety of interpretive methods can be used in the Delta:

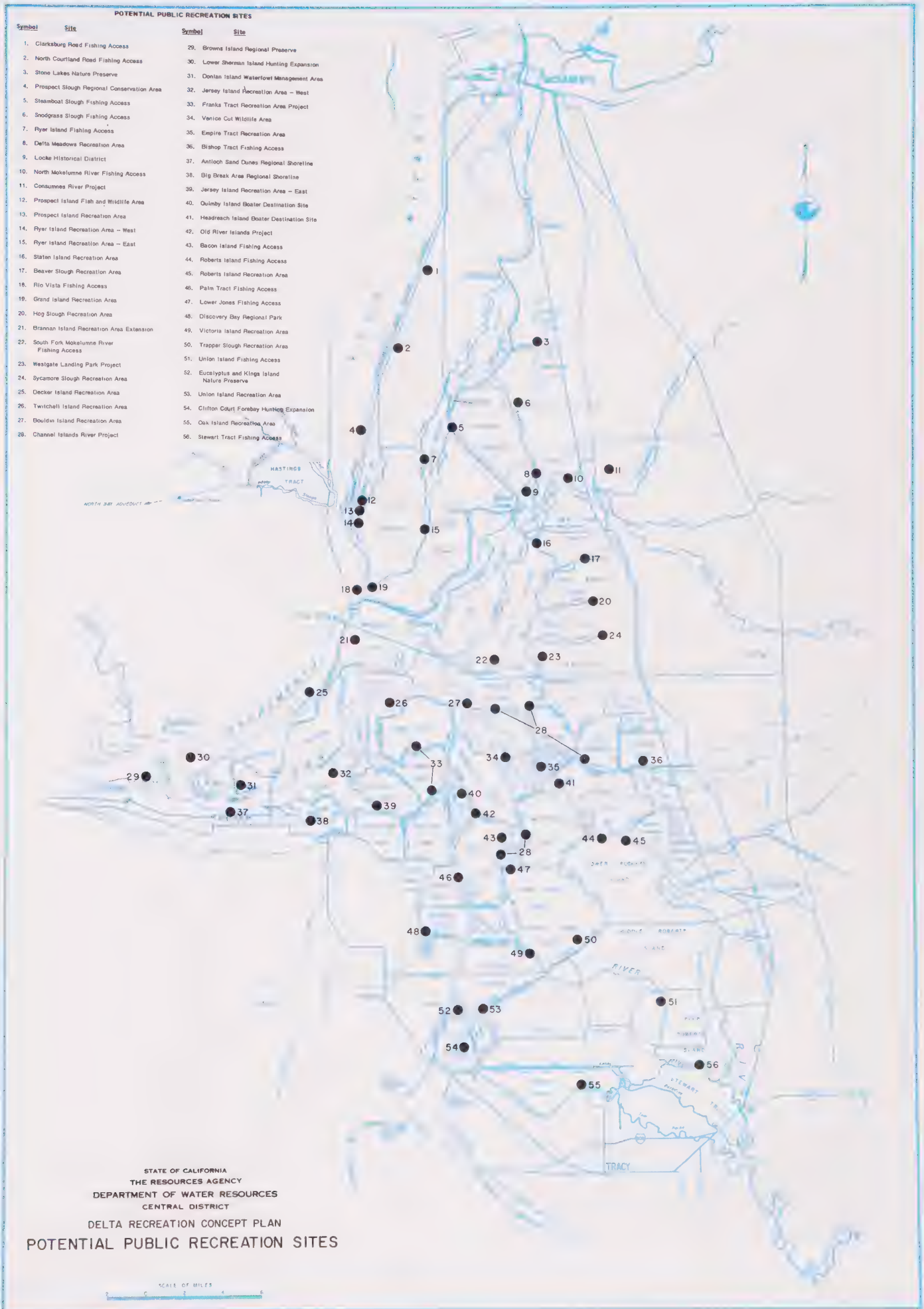
- kiosks/exhibits
- guided boat tours
- interpretive talks
- interpretive publications for self-guided tours:
  - boat tours
  - auto tours
  - bicycle tours\*\*
  - nature trails

\*\* Reference unpublished California Department of Parks and Recreation Delta Bicycle Guide.

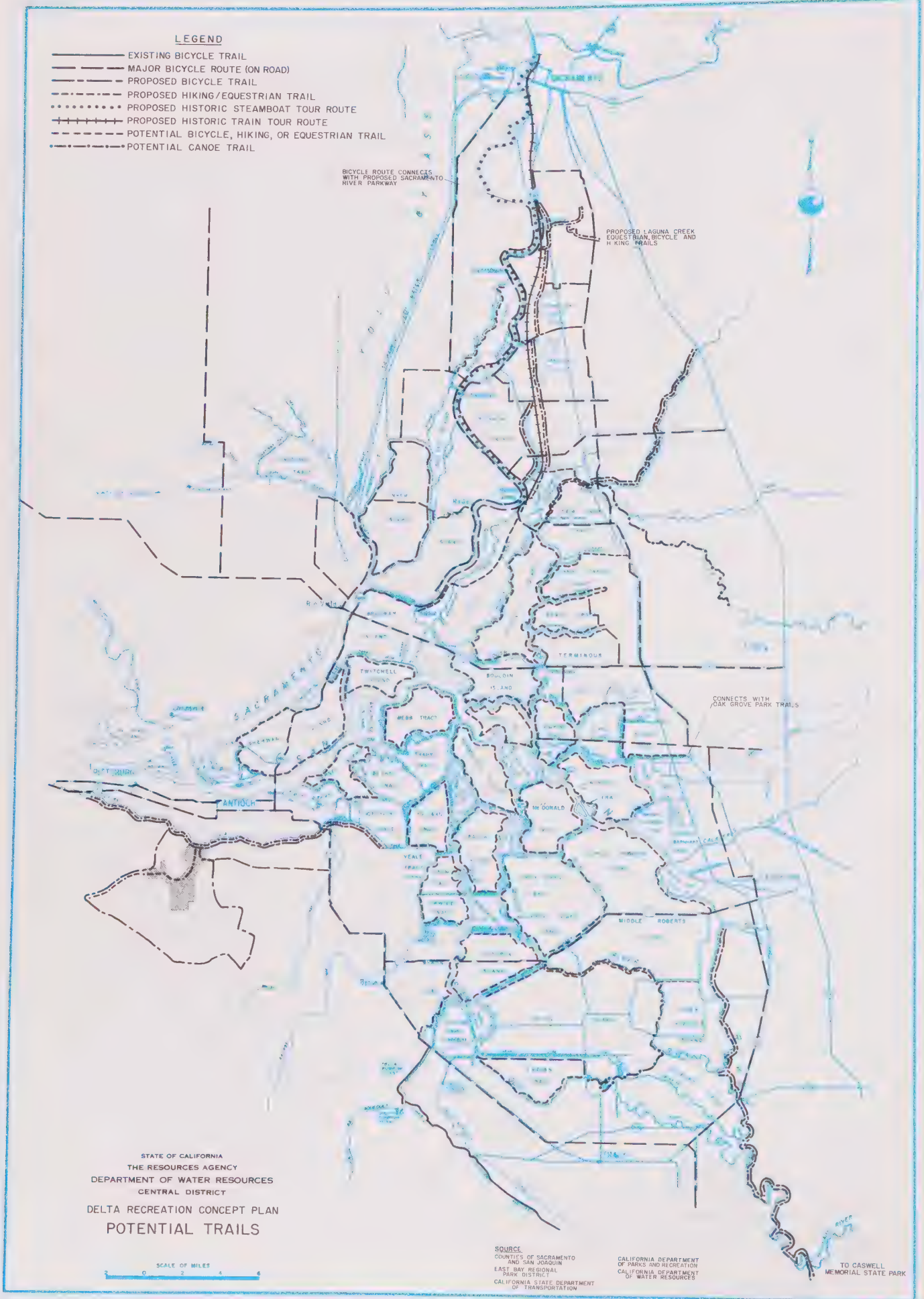
POTENTIAL INTERPRETIVE SERVICES  
(Continued)

-- living interpretation--a  
reenactment of an historic time,  
life, or event











AREA 1



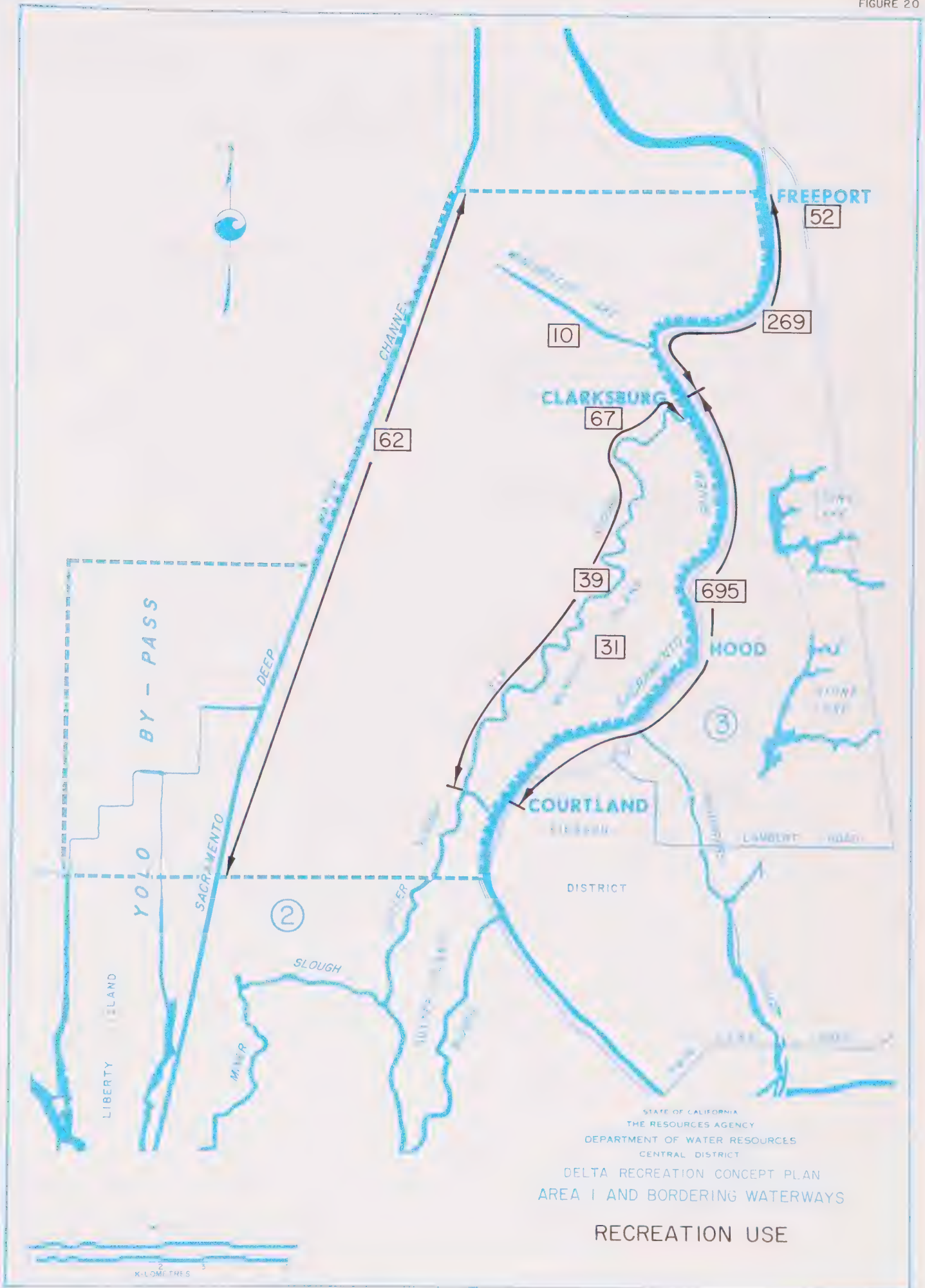


Table 28

## RECREATION USE:

## AREA 1 AND BORDERING WATERWAYS

AREA 1	TOTAL RECREATIONISTS
	N
Clarksburg	67
Sacramento Deep Water Channel from a point directly west of Freeport south to the Yolo County-Solano County Line	62
Freeport	52
Elk Slough from the Sacramento River south to Sutter Slough	39
Merritt Island	31
Winchester Lake	10
<hr/>	
BORDERING WATERWAYS	
<hr/>	
Sacramento River from Clarksburg south to Courtland	695
Sacramento River from Freeport south to Clarksburg	269
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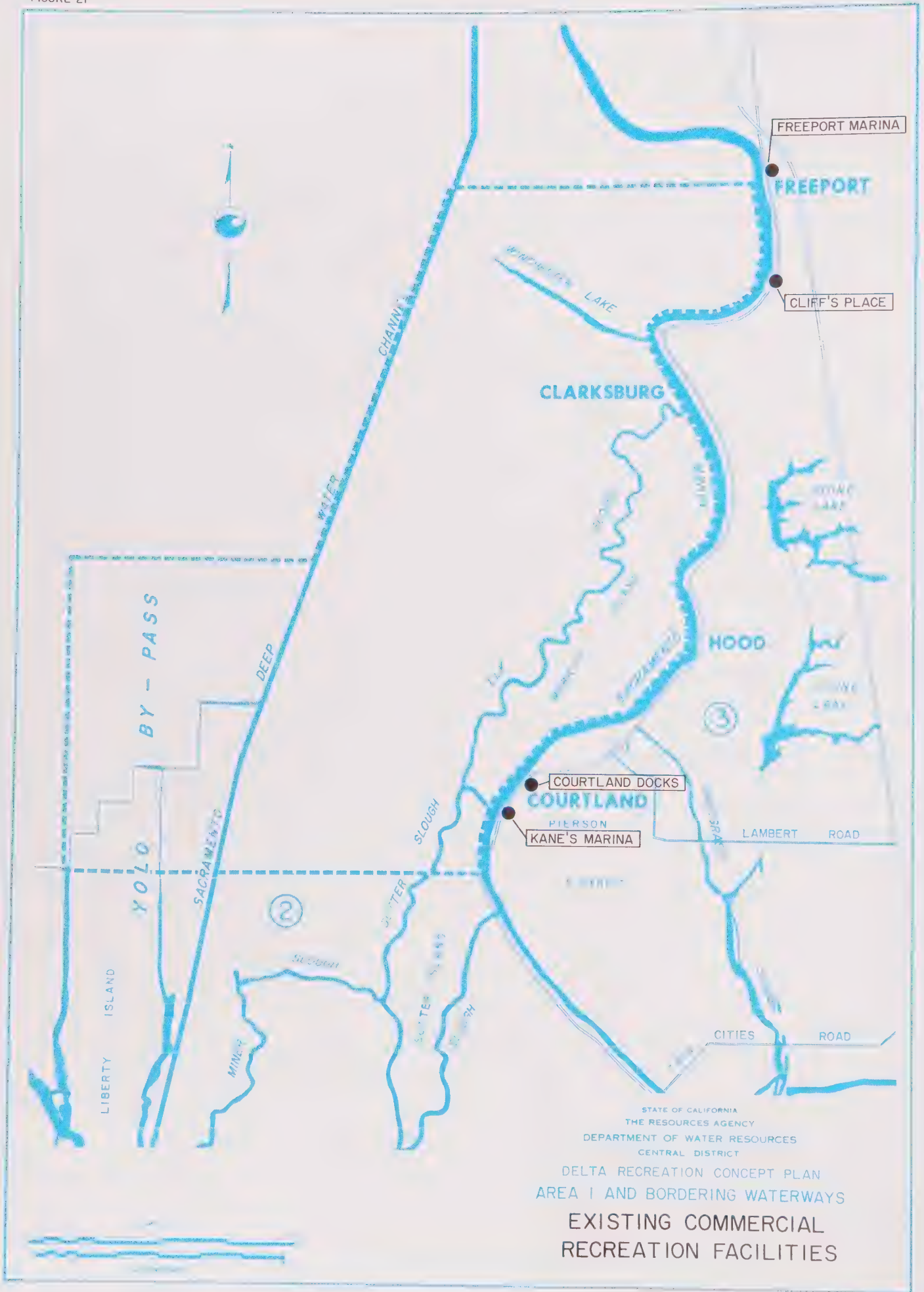


Table 29

## RECREATION ACTIVITY - AREA 1

Activity	Number of Recreation Activities	%
Bicycling	1	0.8
Photography	4	3.3
Water Skiing	5	4.1
Driving for Pleasure	19	15.6
Canoe-Kayak-Rowing	2	1.6
Picnicking	11	9.0
Sailing	-	-
Dirt Biking	2	1.6
Relaxing	16	13.1
Swimming	6	4.9
Sightseeing	13	10.7
Flying	-	-
Snorkeling/Scuba	-	-
Fishing	22	18.0
Hunting	2	1.6
Camping	11	9.0
Motorboating	8	6.6
TOTAL	122	100.0

FIGURE 21



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 1

FREEPORT MARINA

Commercial Marina

Location: Freeport

Access:

Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

- 200 total berths (160 covered; 40 open)
- overnight guest dock for large and small crafts
- restrooms and showers
- paved parking for approximately 120 vehicles
- 28 trailer sites: electricity, water, sewer, showers and restrooms
- supplies: ice, propane, bait/tackle and marine supplies
- fuel: gas/oil, and diesel
- food: groceries, snack bar, restaurant, and beer/wine -- on premises and take-out
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 1 (Continued)

CLIFF'S PLACE

Commercial Marina

Location: Near Freeport

Access:

Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

- 109 total berths (47 covered; 62 open)
- one hoist
- two overnight guest docks (700' and 2,100')
- restrooms
- pumpout station
- paved parking for 35 vehicles and unpaved parking for 200 vehicles
- supplies: ice, propane, bait/tackle and marine supplies
- fuel: gas and oil
- food: limited snacks, snack bar, beer -- on premises and take-out
- open year round, 7 days a week
- expansion plans: remodel

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 1 (Continued)

COURTLAND DOCKS

Commercial Marina

Location: Near Courtland

Access:

Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

- 30 open dry storage spaces
- one launch ramp
- one elevator lift
- two overnight guest docks (100' & 700')
- restrooms
- unpaved parking for 32 vehicles
- rentals: 5 houseboats
- supplies: ice
- food: restaurant, beer/wine -- on premises & take-out
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 1 (Continued)

KANE'S MARINA

Commercial Marina

Location: Courtland

Access:

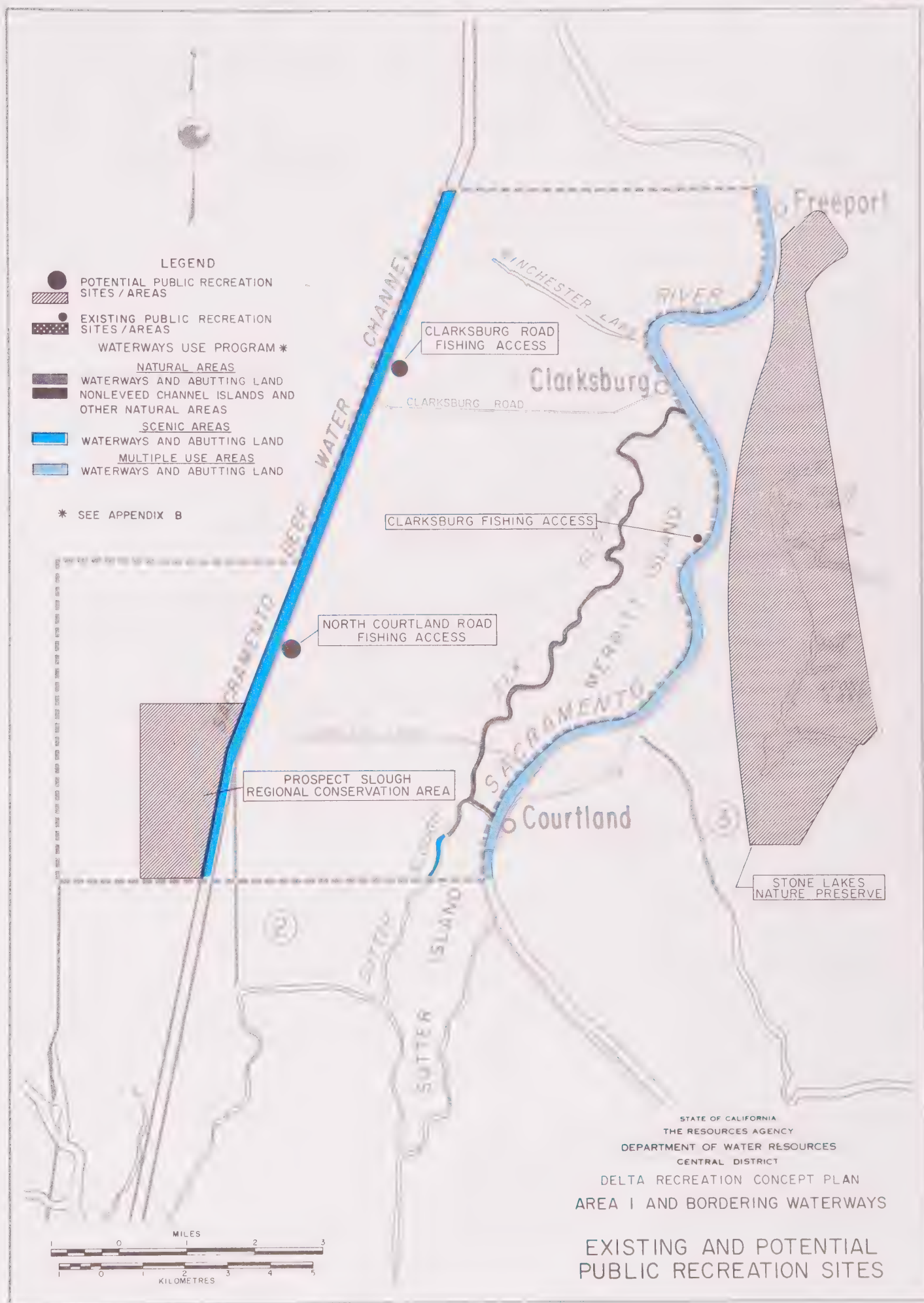
Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

- overnight guest dock
- rentals: fishing boats
- supplies: bait/tackle
- fuel: gas/oil
- food: take-out beer
- no parking available







EXISTING PUBLIC RECREATION FACILITIES -  
AREA 1

CLARKSBURG FISHING ACCESS

Operation/Maintenance: Yolo County  
Park Department

County: Yolo

Access:

Location -- Merritt Island, between  
Clarksburg and Hood

Road - South River Road

Waterway -- Sacramento River

Facilities/Services:

- 4 acres (approximately)
- one launch ramp
- unpaved parking for vehicles
- 4 chemical restrooms
- day use only
- open year round

POTENTIAL PUBLIC RECREATION SITES

AREA 1

Clarksburg Road Fishing Access

Access: Clarksburg Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

Clarksburg Road Fishing Access  
(Continued)

Proposed by: Army Corps of Engineers,  
Sacramento River Deep Water Ship  
Channel (Dredge Material Disposal  
Site)

North Courtland Road Fishing Access

Access: North Courtland Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Proposed by: Army Corps of  
Engineers, Sacramento River Deep Water  
Ship Channel (Dredge Material Disposal  
Site)

Stone Lakes Nature Preserve

Access: West of I-5, south of Beach  
Lake and Freeport

- trails (hiking, biking,  
equestrian)
- nonpowered and low-speed boating
- fishing
- camping

Previously Proposed by: Sacramento  
County Department of Parks and  
Recreation



AREA 2





Table 30

## RECREATION USE:

## AREA 2 and BORDERING WATERWAYS

AREA 2	TOTAL RECREATIONISTS
	N
Rio Vista	569
Ryer Island	212
Cache Slough	94
Prospect Slough	93
Hastings Tract	63
Lindsey Slough	47
Miner Slough	44
Sacramento Deep Water Channel from the Yolo County - Solano Country Line to Cache Slough	39
Prospect Island	37
Liberty Island	21
<hr/> BORDERING WATERWAYS <hr/>	
Steamboat Slough from Sutter Slough South	613
Sutter Slough	130



Table 31

## RECREATION ACTIVITY - AREA 2

Activity	Number of Recreation Activities	%
Bicycling	4	0.6
Photography	21	3.2
Water Skiing	20	3.0
Driving for Pleasure	97	14.7
Canoe-Kayak-Rowing	2	0.3
Picnicking	55	8.3
Sailing	15	2.3
Dirt Biking	11	1.7
Relaxing	74	11.2
Swimming	37	5.6
Sightseeing	89	13.5
Flying	4	0.6
Snorkeling/Scuba	1	0.2
Fishing	83	12.6
Hunting	20	3.0
Camping	55	8.3
Motorboating	73	11.0
TOTAL	661	100.0



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 2

MUNYER'S ISLANDS MARINA

Commercial Marina

Location: Prospect Island

Access:

Road -- Holland Road

Waterway -- Miner Slough

Facilities/Services:

- 50 covered berths
- 300' overnight guest dock for large  
& small crafts
- restrooms & showers
- paved parking for 50 vehicles
- supplies: ice & bait/tackle
- fuel: gas/oil & diesel
- food: snack bar, restaurant,  
beer/wine -- on premises &  
take-out
- open year round, 7 days a week
- expansion plans: more berthing, RV  
parking & camping area

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 2 (Continued)

SNUG HARBOR RESORT

Commercial Marina

Location: Ryer Island

Access:

Road -- Ryer Road East

Waterway -- Steamboat Slough

Facilities/Services:

- 65 covered berths
- 35 open dry storage spaces
- one launch ramp/one lane
- landromat
- unpaved parking for 100 vehicles
- 8 car & RV campsites rented monthly  
or yearly: water, showers &  
restrooms
- picnic area: 8 tables
- supplies: ice, propane & bait
- fuel: gas & oil
- food: restaurant & cocktail  
lounge
- expansion plans: recreation area  
which will have volleyball court,  
horseshoe pit & barbecues

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 2 (Continued)

HIDDEN HARBOR

Commercial Marina

Location: Ryer Island

Access:

Road -- Ryer Road East

Waterway -- Steamboat Slough

Facilities/Services:

- 75 total berths (12 covered;  
63 open)
- overnight guest dock for large &  
small crafts
- restrooms & showers
- paved & unpaved parking for  
approximately 75 vehicles
- 25 campsites rented by year (people  
keep their boats at site):  
electricity, water, sewer, showers  
& restrooms
- supplies: ice, propane & bait
- fuel: gas & oil

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 2 (Continued)

HIDDEN HARBOR (Continued)

Facilities/Services: (Continued)

- food: snack bar (breakfast/lunch),  
liquor & beer -- on premises &  
take-out
- open year round, closed on Mondays

WOODY'S

Commercial Marina

Location: Near Rio Vista

Access:

Road -- Liberty Island Road

Waterway -- Lindsey Slough

Facilities/Services:

- 3 overnight guest docks for large  
& small crafts
- chemical restrooms
- unpaved parking for 8 vehicles
- 4 self-contained campsites
- months & days open vary

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 2 (Continued)

GOLDEN GATE ISLAND RESORT

Commercial Marina

Location: Prospect Island

Access:

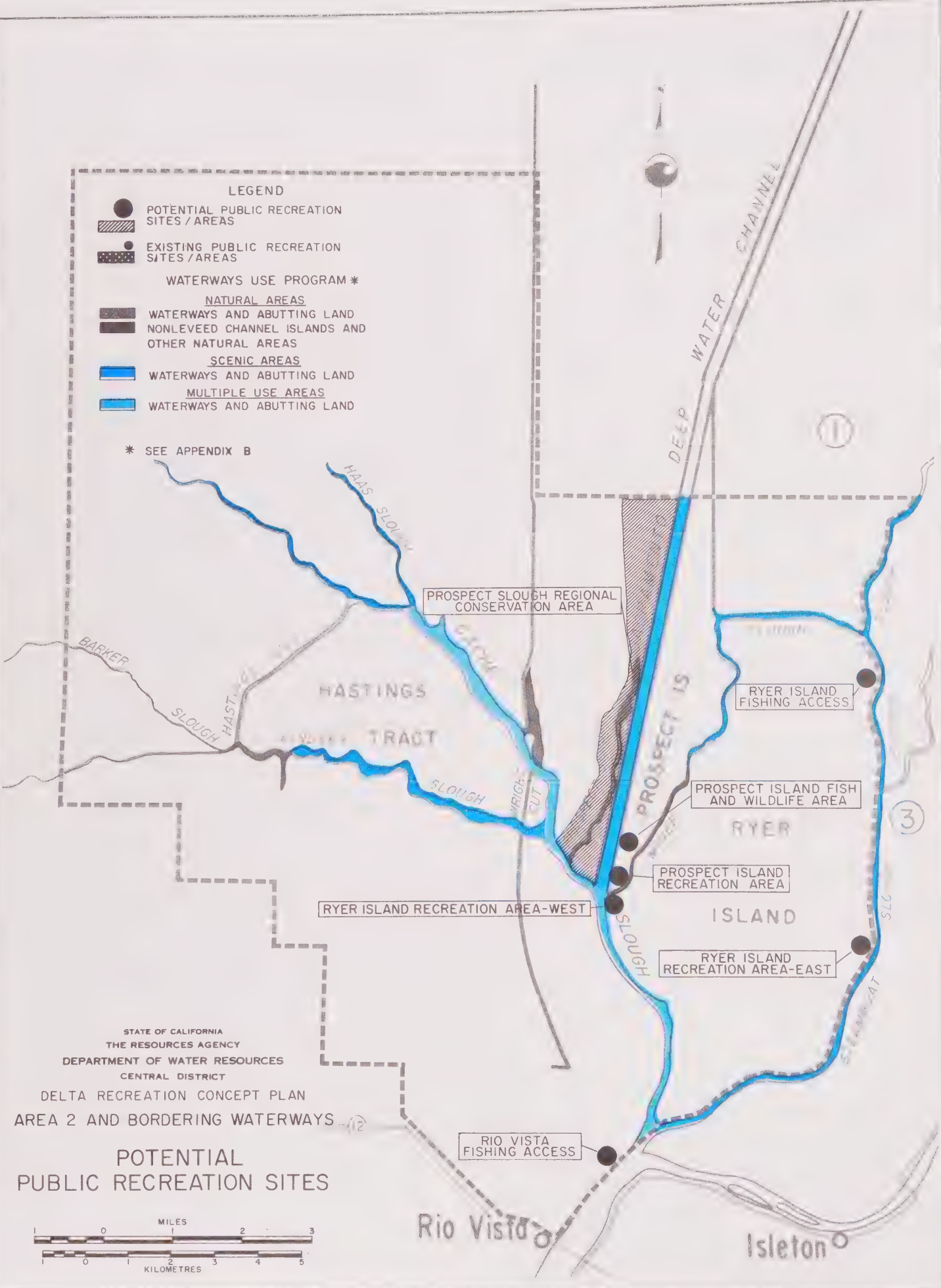
Road -- Waterway access only

Waterway -- Miner Slough

Facilities/Services:

- 3 covered overnight berths
- 4 overnight guest docks for large  
& small crafts
- restrooms & shower
- 40 tent campsites
- picnic area: 12 regular tables,  
one table to accommodate 100 people  
& two barbecues
- supplies: ice
- food: snack bar, restaurant,  
liquor & beer/wine -- on premises  
& take-out
- open year round, 7 days a week





POTENTIAL PUBLIC RECREATION SITES

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 2

AREA 2 (Continued)

Ryer Island Fishing Access

Access: Ryer Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Ryer Island Recreation Area - East

Access: Ryer Road

- fishing
- picnicking
- swimming
- parking area
- chemical toilets
- trash receptacles

Ryer Island Recreation Area - West

Access: Ryer Road

- fishing
- picnicking
- car-top boat launching
- guest docking
- parking area
- chemical toilets
- trash receptacles

Prospect Island Recreation Area

Access: Water Access Only - Cache  
Slough and Miner Slough

- fishing
- picnicking
- guest docking
- chemical toilets
- trash receptacles

Proposed by: Army Corps of Engineers,  
Sacramento River Deep Water Ship  
Channel (Dredge Material Disposal  
Site)

Prospect Island Fish and Wildlife  
Area

Access: Water access only - Cache  
Slough and Miner Slough

- preserve natural environment and  
wildlife habitat
- nature trails

Proposed by: Army Corps of Engineers,  
Sacramento River Deep Water Ship  
Channel (Dredge Material Disposal  
Site)

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 2 (Continued)

Prospect Slough Regional Conservation  
Area

Access: Liberty Island Road; Sacramento  
Deep Water Channel; Cache Slough

-- boater destination sites

-- trails

-- preserve natural environment, with no  
significant alterations

Proposed by: Delta Advisory Planning  
Council

Rio Vista Fishing Access

Access: Road to Ryer Island Ferry,  
North of Rio Vista

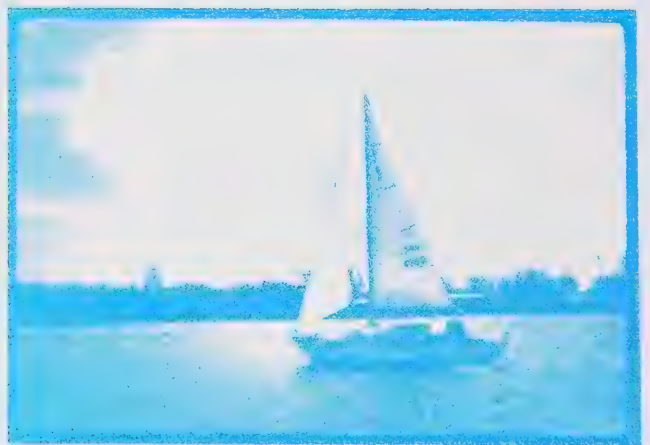
-- fishing

-- picnicking

-- parking area

-- chemical toilets

-- trash receptacles



AREA 3





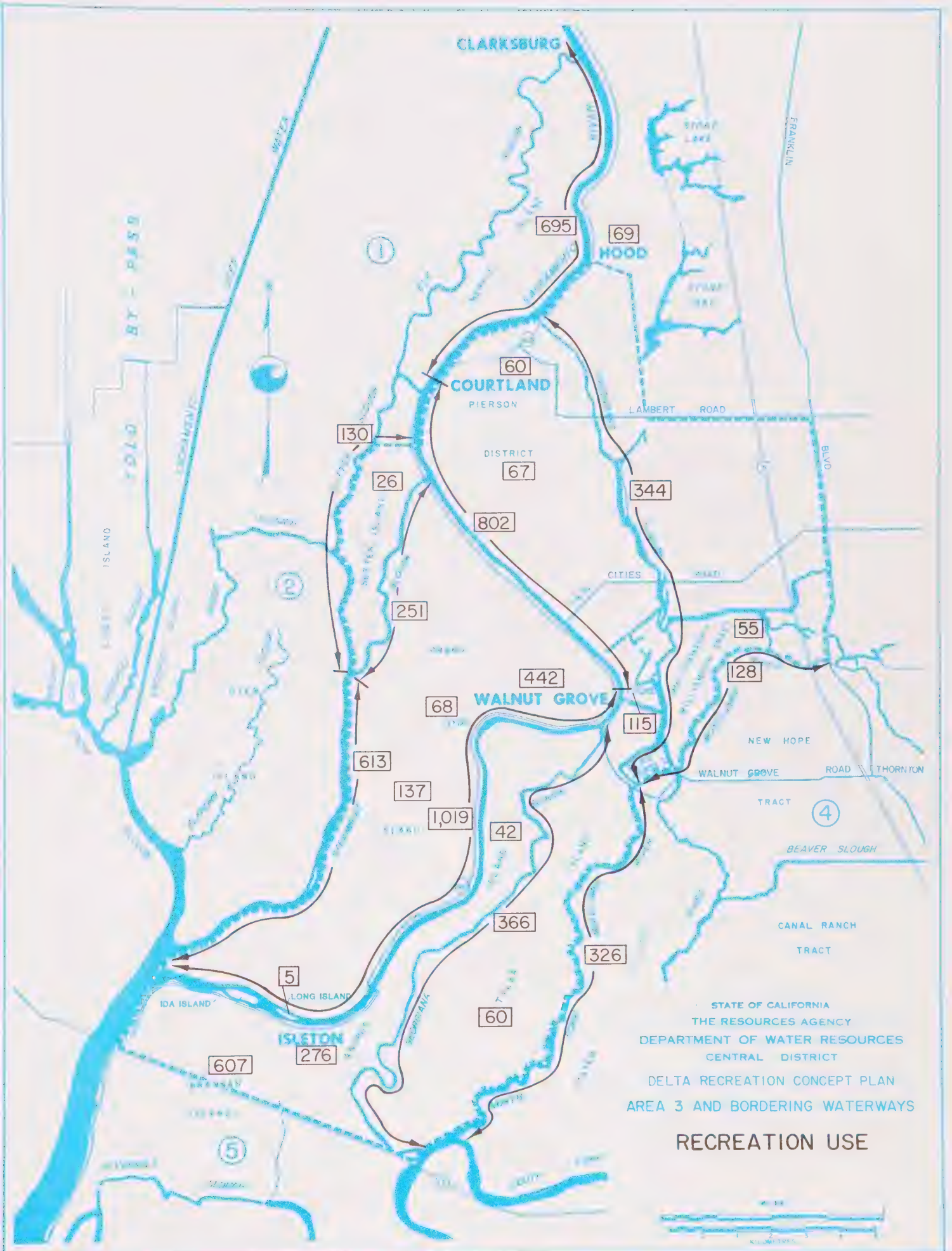


Table 32

## RECREATION USE:

## AREA 3 AND BORDERING WATERWAYS

AREA 3	TOTAL RECREATIONISTS
	N
Sacramento River from Locke to confluence of Cache Slough and Steamboat Slough	1,019
Sacramento River from Courtland to Locke	802
Brannan Island - North	607
Walnut Grove	442
Georgiana Slough	366
Snodgrass Slough	344
Isleton	276
Steamboat Slough from Sutter Slough north	251
Grand Island	137
Locke	115
Hood	69
Ryde	68
Pierson District	67
Courtland	60
Tyler Island	60
McCormack-Williamson	55
Andrus Island - North	42
Sutter Island	26
Long Island	5

Table 32 (Continued)

## RECREATION USE:

## AREA 3 AND BORDERING WATERWAYS

AREA 3	TOTAL RECREATIONISTS
	N

## BORDERING WATERWAYS

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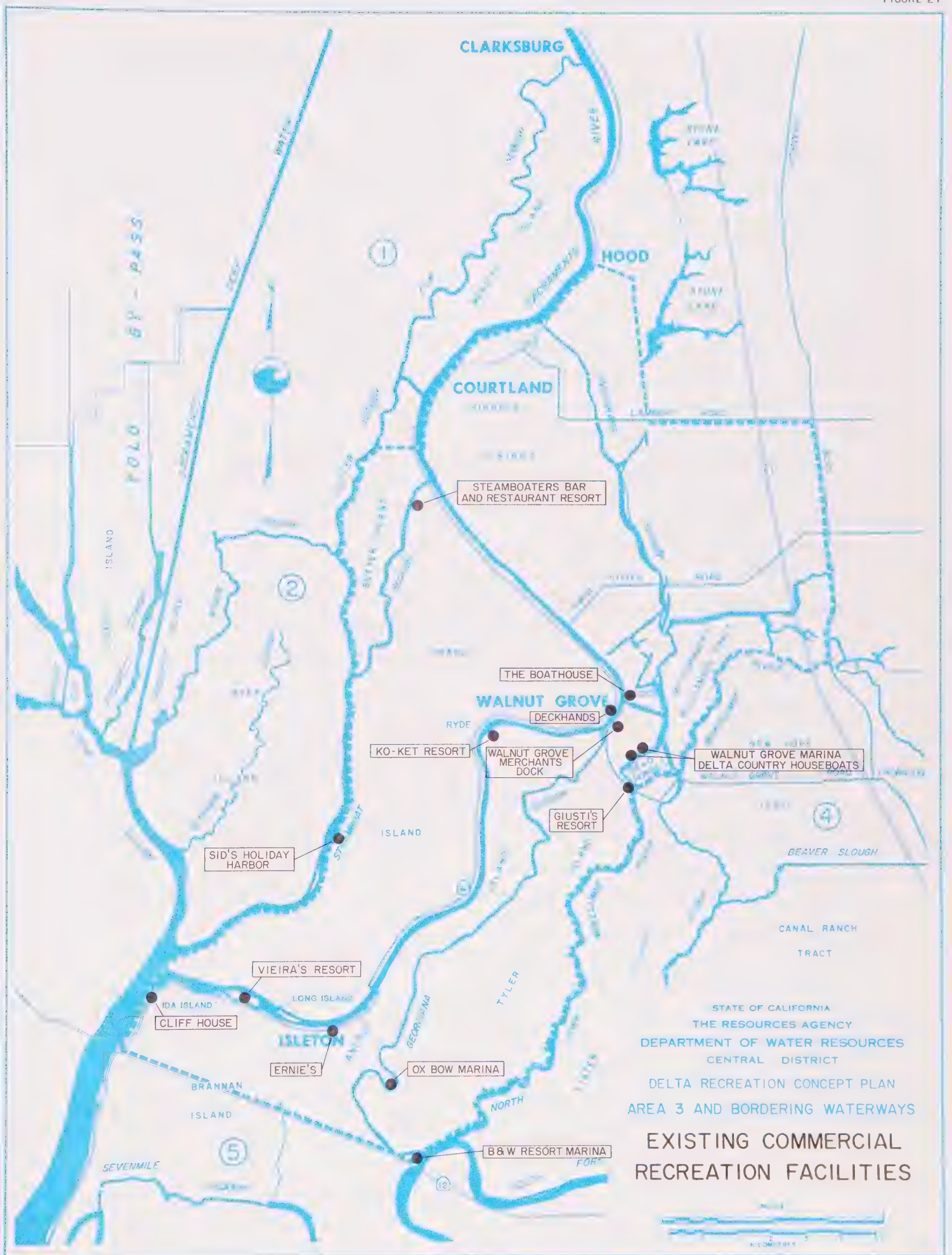
Sacramento River from Clarksburg south to Courtland	695
Steamboat Slough from Sutter Slough south	613
North Fork of Mokelumne River from Snodgrass Slough south to Highway 12	326
Sutter Slough	130
Mokelumne River from Franklin Blvd. to Snodgrass Slough	128

Table 33

## RECREATION ACTIVITY - AREA 3

	Number of Recreation Activities	%
Bicycling	63	2.1
Photography	98	3.3
Water Skiing	142	4.7
Driving for Pleasure	335	11.2
Canoe-Kayak-Rowing	30	1.0
Picnicking	254	8.5
Sailing	28	0.9
Dirt Biking	19	0.6
Relaxing	379	12.7
Swimming	229	7.7
Sightseeing	333	11.1
Flying	19	0.6
Snorkeling/Scuba	9	0.3
Fishing	392	13.1
Hunting	46	1.5
Camping	234	7.8
Motorboating	383	12.8
TOTAL	2,993	100.0







EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

THE BOATHOUSE

Commercial Marina

Location: Locke

Access:

Road -- River Road

Waterway -- Sacramento River

Facilities/Services:

- 85 covered dry storage spaces
- one boat lift
- 400' overnight guest dock for large  
& small crafts
- restrooms/showers for customers  
only
- boat engine & hull maintenance
- paved parking for 150 vehicles
- rentals: 4 fishing boats & ski  
equipment
- supplies: ice

THE BOATHOUSE (Continued)

Facilities/Services: (Continued)

- fuel: gas & oil
- food: snacks
- open year round, 7 days a week

WALNUT GROVE MERCHANTS DOCK

Community Dock

Location: Walnut Grove

Access:

Road -- River Road

Waterway -- Sacramento River

Facilities/Services:

- 100' overnight guest dock for large  
& small crafts
- dock maintained by San Joaquin  
First Federal Savings
- buoys soon to be put into river to  
create 5-mile speed zone by dock
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

WALNUT GROVE MARINA\*

Commercial Marina

Location: Tyler Island

Access:

Road -- Old Levee Road

Waterway -- Snodgrass Slough

Facilities/Services:

- 165 total berths (69 covered;  
96 open)
- overnight 300' guest dock for large  
& small crafts
- restrooms & showers
- boat engine & hull maintenance
- dry dock
- pumpout station
- paved parking for 180 vehicles &  
one acre for unpaved parking
- rentals: 3 skiboats, 20 house-  
boats, 5 dinghys, & ski  
equipment
- supplies: ice, propane, bait/tackle,  
& marine supplies
- fuel: gas/oil & diesel

\* Delta Country Houseboats is located in  
Walnut Grove Marina and is considered  
part of that marina. The above-  
mentioned houseboats, pumpout station,  
propane and dry dock are at Delta  
Country Houseboats.

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

WALNUT GROVE MARINA\* (Continued)

Facilities/Services: (Continued)

- food: groceries & snack bar
- boat sales
- open year round, 7 days a week
- expansion plans: add 65 covered  
berths for large crafts (over 45')

GIUSTI'S RESORT

Community Marina

Location: Tyler Island

Access:

Road -- Walnut Grove Road

Waterway -- Confluence of Mokelumne  
River & Snodgrass Slough

Facilities/Services:

- overnight guest dock for large &  
small crafts
- restrooms located in restaurant
- paved parking for 40 vehicles &  
unpaved parking for 20 vehicles
- supplies: ice
- fuel: gas & oil
- food: restaurant (closed Mondays),  
cocktail lounge, & take-out beer  
& wine
- closed Mondays & the month of  
January

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

B & W RESORT MARINA

Commercial Marina

Location: Andrus Island

Access:

Road -- Terminous Road off Highway 12

Waterway -- Confluence of North Fork  
Mokelumne River &  
Georgiana Slough

Facilities/Services:

- 106 total berths (70 covered; 36 open)
- 30 covered dry storage spaces
- one launch ramp/3 lanes
- overnight guest dock for small crafts only
- restrooms & showers
- laundromat
- 4 acres of unpaved parking
- 23 cottages rented weekly or more
- supplies: ice & bait/tackle
- fuel: gas & oil
- food: groceries, snack bar, liquor & beer -- on premises & take-out
- boat sales
- open year round, 7 days a week

OX BOW MARINA

Commercial Marina

Location: Andrus Island

Access:

Road -- Terminous Road

Waterway -- Georgiana Slough

Facilities/Services:

- 425 covered berths
- one launch ramp
- overnight guest dock for 20 large & small crafts
- restrooms & showers
- boat engine maintenance
- pumpout station
- laundromat
- paved parking for 525 vehicles
- supplies: ice, marine supplies
- fuel: gas/oil, & diesel
- food: take-out beer
- open year round, 7 days a week
- expansion plans: restaurant

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

ERNIE'S

Commercial Marina

Location: Andrus Island

Access:

Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

- 200' overnight guest dock for large & small crafts
- unpaved parking for 30 vehicles
- food: restaurant/bar -- liquor -- on premises & take-out
- open year round, 7 days a week

VIEIRA'S RESORT

Commercial Marina

Location: Ida Island

Access:

Road -- Highway 160

Waterway -- Sacramento River

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

VIEIRA'S RESORT (Continued)

Facilities/Services:

- 146 total berths (125 covered; 21 open, day-use)
- two launch ramps
- guest dock for large & small crafts
- boat engine & hull maintenance
- unpaved parking for 24 vehicles
- rentals: 8 rowboats
- 24 campsites: electricity, water, sewer, showers, & restrooms
- 20 tent campsites
- picnic area: 6 tables
- supplies: ice, propane & bait/tackle
- fuel: gas & oil
- food: groceries, restaurant & beer/wine bar
- open May through October, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

CLIFF HOUSE

Commercial Marina

Location: Brannan Island

Access:

Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

- 10 total berths (5 covered; 5 open)
- overnight guest dock for 5 small crafts
- restrooms
- unpaved parking for 25 vehicles
- supplies: ice
- food: snack bar, beer -- on premises & take-out
- open year round, closed Tuesdays

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

SID'S HOLIDAY HARBOR

Commercial Marina

Location: Grand Island

Access:

Road -- Grand Island Road

Waterway -- Steamboat Slough

Facilities/Services:

- overnight guest dock for large & small crafts
- restrooms & showers
- paved & unpaved parking for approximately 50 vehicles
- supplies: ice
- food: snack bar, beer bar, take-out beer
- open year round, closed on Mondays



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

KO-KET RESORT

Commercial Marina

Location: Grand Island

Access:

Road -- Isleton Road

Waterway -- Sacramento River

Facilities/Services:

- one launch ramp
- overnight guest dock for 8 boats
- restrooms & showers
- unpaved parking for 20 vehicles & boat trailers
- 15 car & RV campsites: electricity, water, sewer
- picnic area -- 16 tables
- supplies: ice & bait
- fuel: gas & oil
- food: snack bar/beer bar & dining room
- open 7 days a week seasonally, April through October

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

DECKHANDS

Retail Store

Location: Grand Island

Access:

Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

- overnight guest dock for large & small crafts -- use of restrooms in store during day
- supplies: ice, propane, bait/tackle & marine supplies
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 3 (Continued)

STEAMBOATERS BAR AND RESTAURANT RESORT

Commercial Restaurant with Guest Dock

Location: Grand Island

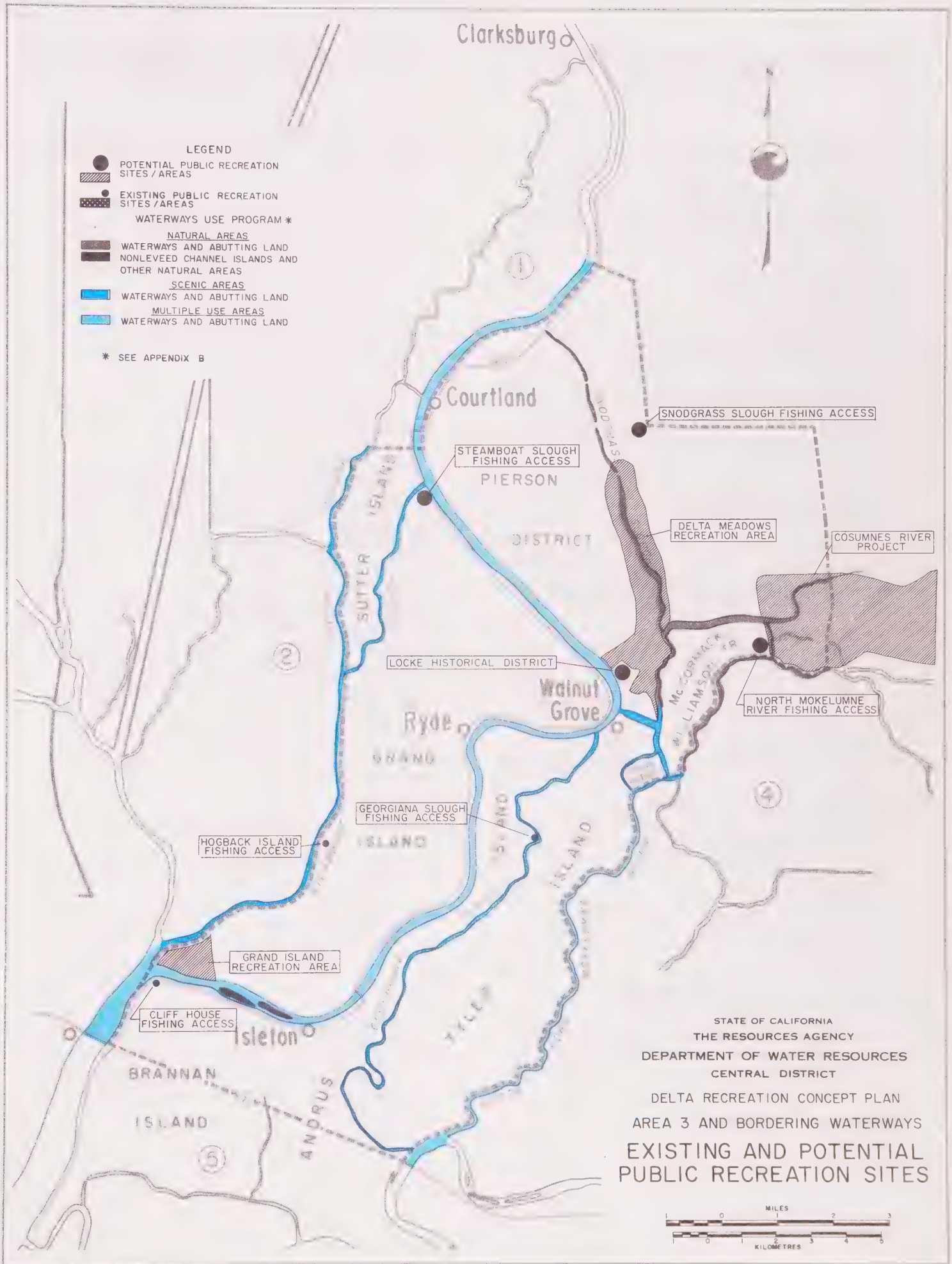
Access:

Road -- Grand Island Road

Waterway -- Steamboat Slough

Facilities/Services:

- overnight guest dock for large &  
small crafts
- restrooms & showers
- boat engine maintenance
- 1/4 mile of paved levee parking
- rentals: one houseboat & two  
jetskis
- 10 to 20 tent campsites
- supplies: ice
- fuel: gas & oil
- food: snack bar, restaurant,  
cocktail lounge, & take-out beer
- open year round, 7 days a week



EXISTING PUBLIC RECREATION FACILITIES  
AREA 3

HOGBACK ISLAND FISHING ACCESS

Operation/Maintenance: Sacramento  
County Department of Parks and  
Recreation

County: Sacramento

Access:

Location -- Grand Island

Road - Grand Island Road

Waterway -- Steamboat Slough

Facilities/Services:

-- 11 acres

-- two launch ramps/one lane each

-- 100' guest dock

-- picnic area: 13 tables &  
10 barbecues

-- paved parking for 55 vehicles &  
paved parking for 47 boat/trailers

-- 4 chemical restrooms

-- two drinking fountains

-- day use only

-- open year round

CLIFF HOUSE FISHING ACCESS

Operation/Maintenance: Sacramento  
County Department of Parks and  
Recreation

County: Sacramento

EXISTING PUBLIC RECREATION FACILITIES  
AREA 3 (Continued)

CLIFF HOUSE FISHING ACCESS (Continued)

Access:

Location -- Brannan Island, one  
mile north of Rio Vista  
Bridge

Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

-- two acres

-- paved parking for 28 vehicles

-- two chemical restrooms

-- day use only

-- open year round

GEORGIANA SLOUGH FISHING ACCESS

Operation/Maintenance: Sacramento  
County Department of Parks and  
Recreation

County: Sacramento

Access:

Location -- Tyler Island

Road -- Georgiana Andrus Island  
Road

Waterway -- Georgiana Slough

Facilities/Services:

-- 1.05 acres

-- car top boat launching facility

-- paved parking

-- two chemical restrooms

-- day-use only

-- open year round



PROPOSED PUBLIC RECREATION FACILITIES  
AREA 3

DELTA MEADOWS

Proposed Operation: California  
Department of Parks and Recreation

County: Sacramento

Access:

Waterway -- Snodgrass Slough, water  
access only

Road -- West of Highway 160, near  
the town of Locke

The project area is one of the most significant natural areas remaining of original Delta Wilderness. Delta Meadows is comprised of a series of islands that are several feet higher than the average level of Delta land are surrounded by several interlocking waterways. Flood control levees buffer the entire project. These levees and their waterside berms support lush vegetation which screens and protects the scenic and natural environment of the area. An extensive Indian burial ground is located on the highest of the small hills. The entire area abounds with plant and small animal life including over 100 species of birds.

Boaters consider the Meadows a haven where they may traverse the waters of many channels and anchor on Snodgrass and Lost Sloughs. Most of the area is privately owned and yet the public is allowed to boat, swim, camp, or picnic in the area.

Funds to acquire this property were provided by Chapter 757/65 (1964 Bond Act) and reappropriated in 320/76, Item 403.11(a). The 1980 (January

PROPOSED PUBLIC RECREATION FACILITIES  
AREA 3 (Continued)

DELTA MEADOWS (Continued)

Project Status Report for State Park Acquisition and Development indicated that \$970,000 has been appropriated to acquire 9 parcels or 662 acres of this land. The size of the proposed park has been reduced almost half from the original 1,265 acres. Over the years, Delta Meadows was not purchased due to many difficulties encountered in determining the State's ownership of tidal lands. Presently, surveys have been finalized and agreement has been made between the Attorney General and State Lands Commission. Negotiations to purchase Delta Meadows will soon begin.

Over the last 13 years this project has been highly recommended in various reports released by the State Department of Parks and Recreation, The Resources Agency and Sacramento County. In fact, the 1976 revision of The Resources Agency's Delta Master Recreation Plan recommended that Department of Parks and Recreation give high priority to the acquisition of Delta Meadows.

The Department's intent in acquiring Delta Meadows is to preserve the natural environment and enhance the recreational opportunities related to the waterway by providing appropriate recreational facilities. Any development in the area of acquisition would be of a low-intensity nature, and future development would be subject to the State Park and Recreation Commission's approval of a comprehensive Resource Management and General Development Plan, including the required CEQA compliance.



## POTENTIAL PUBLIC RECREATION SITES

### AREA 3

#### Grand Island Recreation Area

##### Access:

Grand Island Road

- fishing
- picnicking
- swimming
- camping
- boat launching
- guest docking
- parking Area
- restrooms/showers
- potable water
- trash receptacles
- pumpout station

Proposed by: Army Corps of Engineers,  
Sacramento River Deep Water Ship  
Channel (Dredge Material Disposal Site)

#### Steamboat Slough Fishing Access

##### Access:

Highway 160 (near Steamboat Slough)

- fishing
- picnicking
- historic interpretive services
- parking area
- chemical toilets
- trash receptacles

## POTENTIAL PUBLIC RECREATION SITES (Continued)

### AREA 3 (Continued)

#### North Mokelumne River Fishing Access

##### Access:

Levee Road off Franklin Road

- fishing
- picnicking
- boat launching
- parking area
- chemical toilets
- trash receptacles

#### Snodgrass Slough Fishing Access

##### Access:

Lambert Road

- fishing
- picknicking
- parking area
- chemical toilets
- trash receptacles

#### Delta Meadows Recreation Area

Access: Water Access only -  
Snodgrass Slough

- preserve natural environment
- fishing
- picnicking

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 3 (Continued)

Delta Meadows Recreation Area  
(Continued)

- swimming
- camping
- trails

Proposed by: California Department of  
Parks and Recreation

Locke Historic District

Access:

Highway 160

- historic interpretive services of  
oldest Chinese-built town in  
U.S. still standing

Previously Proposed by: California  
Department of Parks and Recreation

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 3 (Continued)

Cosumnes River Project

Access:

Twin Cities Road

- preserve natural environment
- fishing
- picnicking
- camping
- trails
- parking area
- chemical toilets
- trash receptacles

Proposed by: Sacramento County  
Department of Parks and Recreation





AREA 4





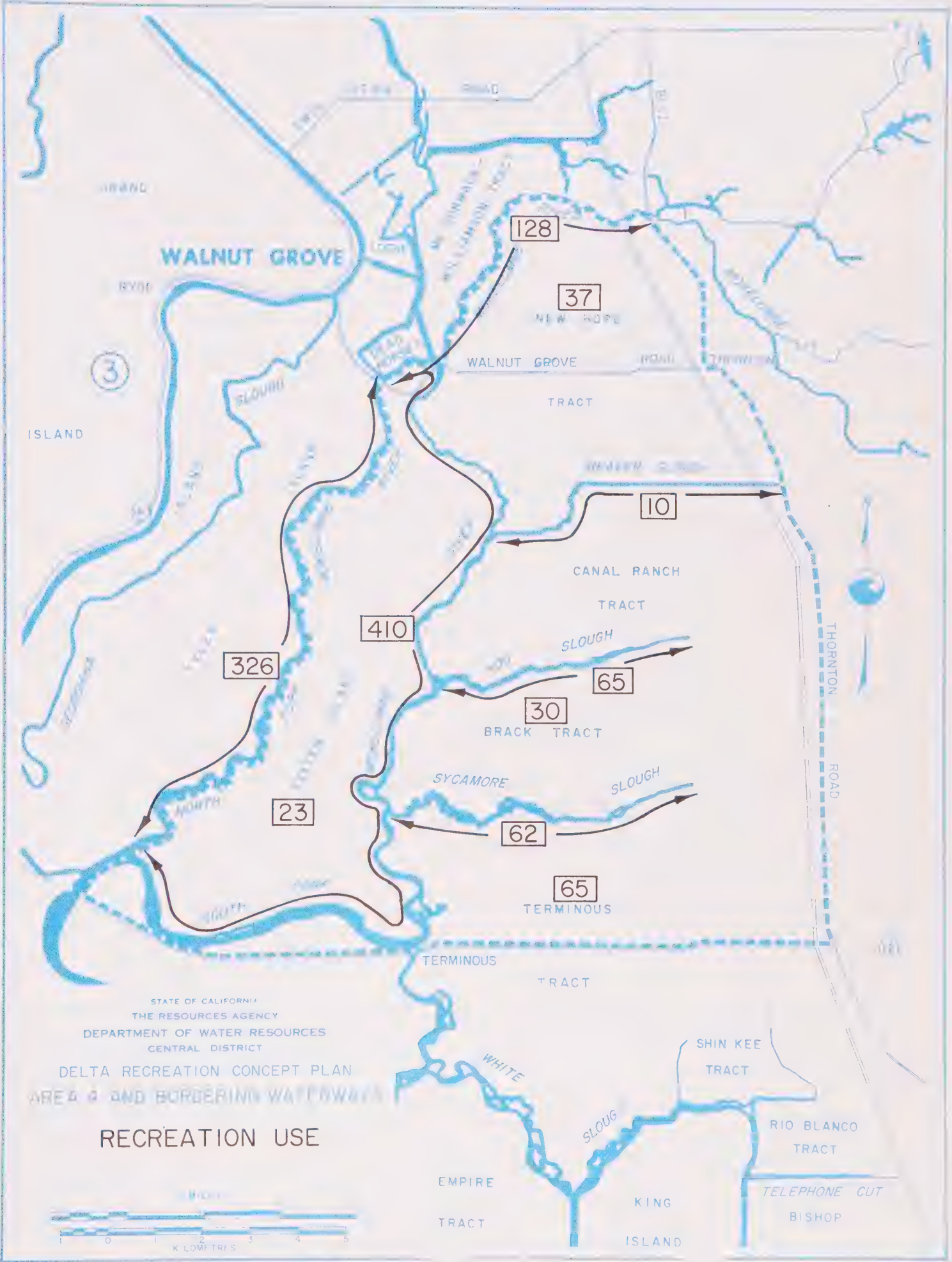


Table 34

## RECREATION USE:

## AREA 4 AND BORDERING WATERWAYS

AREA 4	TOTAL RECREATIONISTS
	N
South Fork of Mokelumne River from Snodgrass Slough area south to North Fork of Mokelumne River	410
Hog Slough	65
Terminus Tract - North	65
Sycamore Slough	62
New Hope Tract	37
Brack Tract	30
Staten Island	23
Beaver Slough	10
<hr/> BORDERING WATERWAYS <hr/>	
North Fork of Mokelumne River from Snodgrass Slough south to Highway 12	326
Mokelumne River from Franklin Blvd. to Snodgrass Slough	128

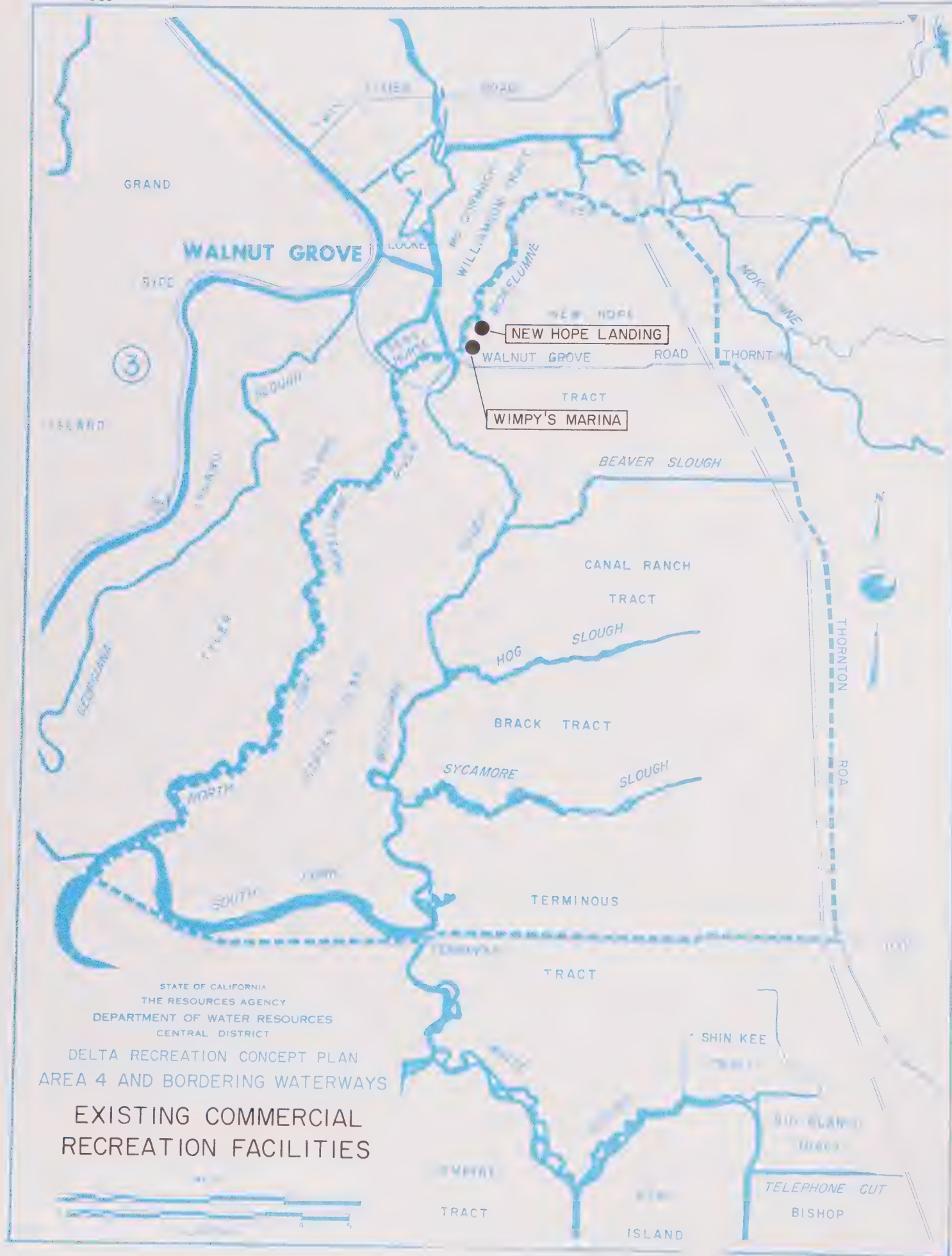
Table 35

## Recreation Activity - Area 4

Activity	Number of Recreation Activities	%
Bicycling	14	3.0
Photography	17	3.7
Water Skiing	36	7.8
Driving for Pleasure	37	8.0
Canoe-Kayak-Rowing	2	0.4
Picnicking	37	8.0
Sailing	3	0.6
Dirt Biking	3	0.6
Relaxing	54	11.7
Swimming	36	7.8
Sightseeing	45	9.7
Flying	-	-
Snorkeling/Scuba	-	-
Fishing	51	11.0
Hunting	6	1.3
Camping	41	8.9
Motorboating	80	17.3
TOTAL	462	100.0



FIGURE 30



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 4

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 4 (Continued)

NEW HOPE LANDING

Commercial Marina

Location: New Hope Tract

Access:

Road -- Levee Road off Walnut Grove  
Road

Waterway -- Mokelumne River

Facilities/Services:

- 60 total open berths of which 30 are day-use
- launch ramp
- guest dock for large & small crafts
- restrooms & showers
- pumpout station
- laundromat
- unpaved parking for 20 vehicles
- rentals: 8 houseboats, 8 fishing boats, ski equipment & fishing equipment
- 30 car & RV campsites: electricity, water, showers & restrooms
- supplies: ice, propane, bait/tackle, & marine supplies
- fuel: gas & oil
- food: grocery store which sells hot sandwiches
- open year round, 7 days a week

WIMPY'S MARINA

Commercial Marina

Location: New Hope Tract

Access:

Road -- Walnut Grove Road

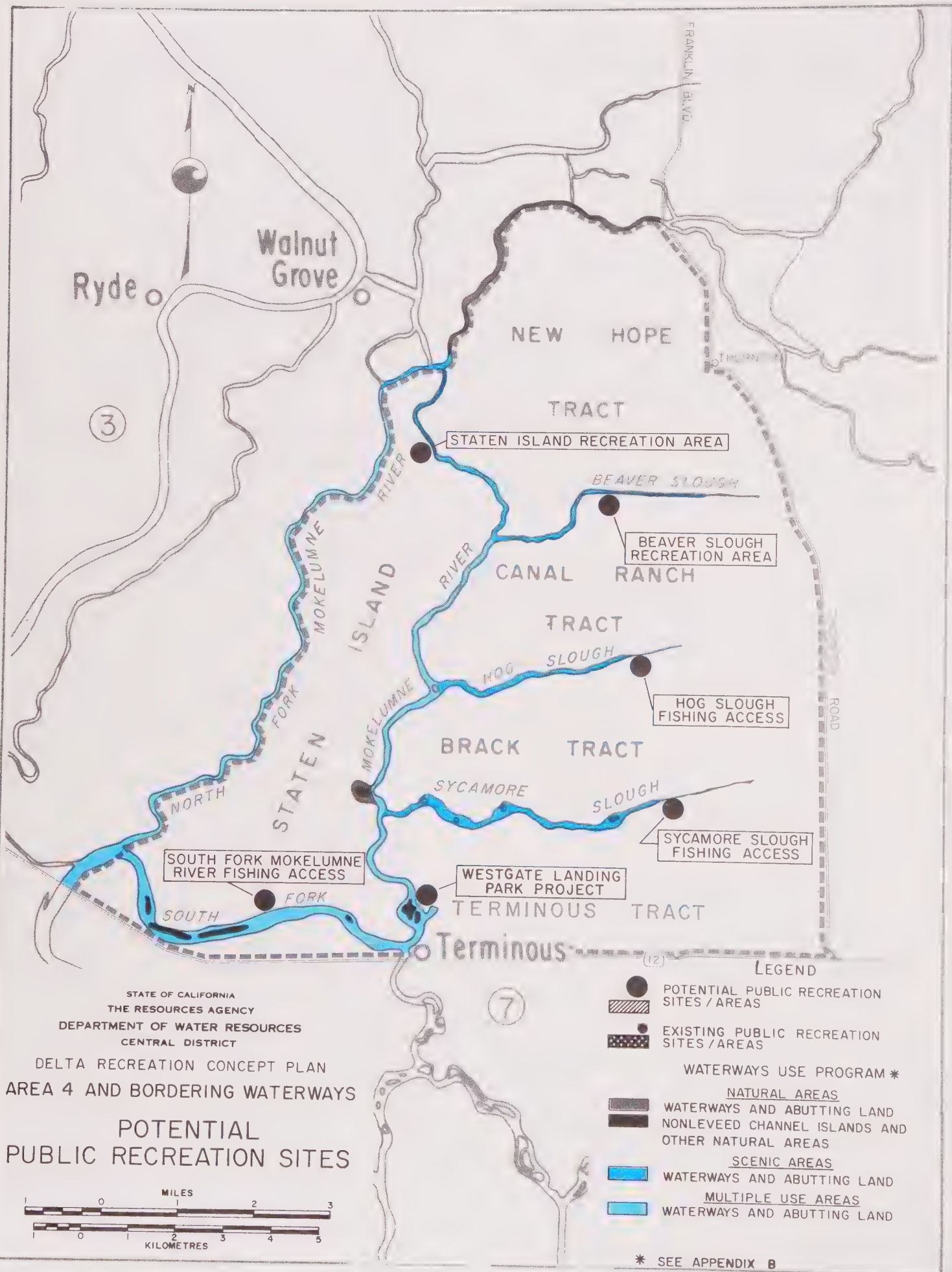
Waterway -- Mokelumne River

Facilities/Services:

- 60 open day-use berths
- one launch ramp/two launch lanes
- overnight guest dock for large & small crafts
- restrooms & showers
- paved parking
- 12 car & RV campsites: electricity, water, showers & restrooms
- picnic area: 4 picnic tables
- supplies: ice, bait/tackle & marine supplies
- fuel: gas & oil
- food: groceries, restaurant, snack bar & cocktail lounge
- boat sales
- open year round, 7 days a week



FIGURE 31



PROPOSED PUBLIC RECREATION FACILITIES  
AREA 4

WESTGATE LANDING COUNTY PARK PROJECT

Operation/Maintenance: San Joaquin  
County Parks Department

Access:

Location -- Terminous, west of Lodi

Road -- Glasscock Road - 1/2 mile  
north of Highway 12

Waterway -- located on a "lagoon" off  
the south fork of the  
Mokelumne River

San Joaquin County plans to have  
Westgate Landing Park developed on 20  
plus-or-minus acres of county-owned  
land. The project will emphasize the  
park as a place for bank fishing.  
Development is to include an 18,000 sq.  
ft. parking lot, a concrete walkway,  
restroom, lighting, fencing, landscaping  
and irrigation, a fishing pier, levee  
riprapping, signing and potable water.  
The County will also construct a paved

PROPOSED PUBLIC RECREATION FACILITIES  
AREA 4 (Continued)

WESTGATE LANDING COUNTY PARK PROJECT  
(Continued)

access road to the site from Glasscock  
Road.

Presently, San Joaquin County is  
developing a prospectus which private  
business may bid on in order to develop  
a camping area at the park. The  
prospectus will indicate the County's  
plans to lease approximately 3 acres to  
a private developer who in return will  
develop and maintain perhaps 150 to 200  
campsites. The private developer will  
give an agreed-upon percentage of  
"camping income" to the County. The  
lease will last a designated time period  
of perhaps 20 years, with San Joaquin  
County ultimately owning one mile of  
bank fishing and improvements becoming  
public ownership.

Park planning and hiring the Park  
Superintendent was completed and the  
target date for park development  
completion is spring 1981.

POTENTIAL PUBLIC RECREATION SITES

AREA 4

Beaver Slough Recreation Area

Access:

Peltier & Unimproved Road

- fishing
- picnicking
- camping
- parking area
- chemical toilets
- potable water
- trash receptacles

Staten Island Recreation Area

Access:

Staten Island Road

- fishing
- picnicking
- camping
- parking area
- chemical toilets
- potable water
- trash receptacles

South Fork Mokelumne River Fishing Access

Access:

Staten Island Road, East on Unimproved Road

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 4 (Continued)

South Fork Mokelumne River Fishing Access (Continued)

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Proposed by: Army Corps of Engineers,  
Sacramento-San Joaquin Delta  
Investigation

Sycamore Slough Fishing Access

Access:

Guard Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Hog Slough Fishing Access

Access:

Woodbridge Road North

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 4 (Continued)

Westgate Landing County Park Project

Access:

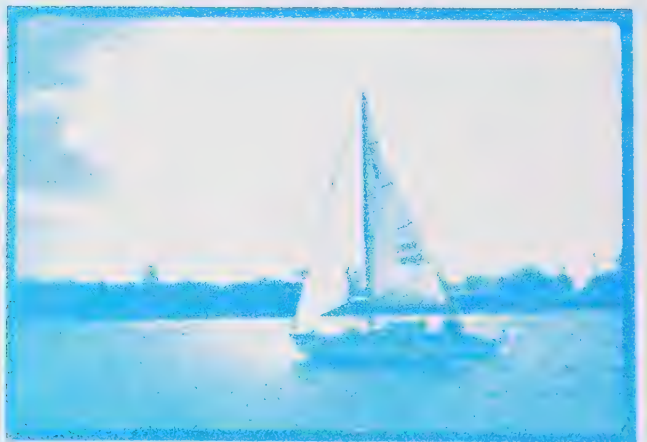
Highway 12

- fishing
- picnicking
- camping
- parking area
- restrooms
- potable water

Proposed by: San Joaquin County  
Parks and Recreation Department







AREA 5



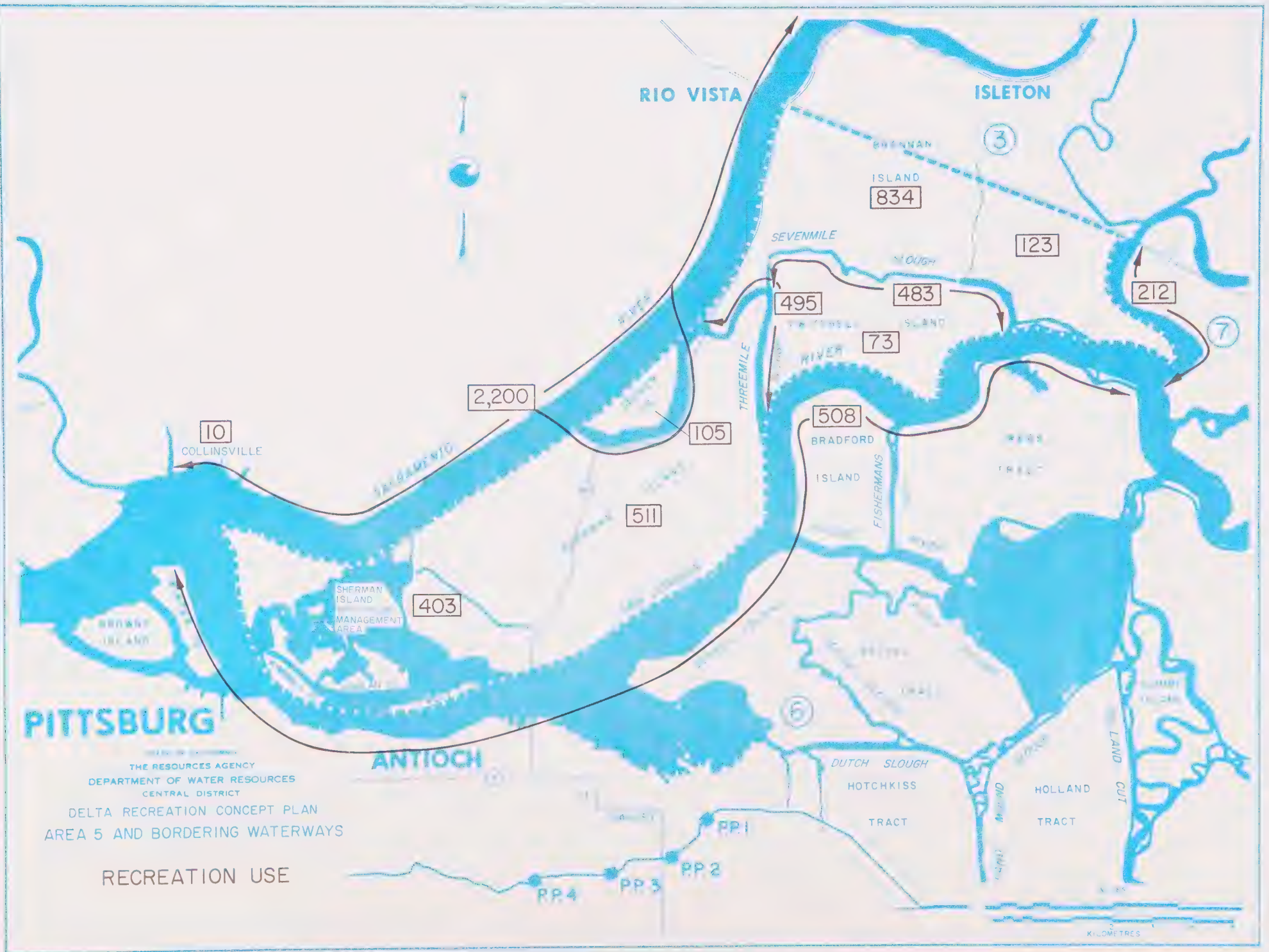


FIGURE 32

Table 36

## RECREATION USE:

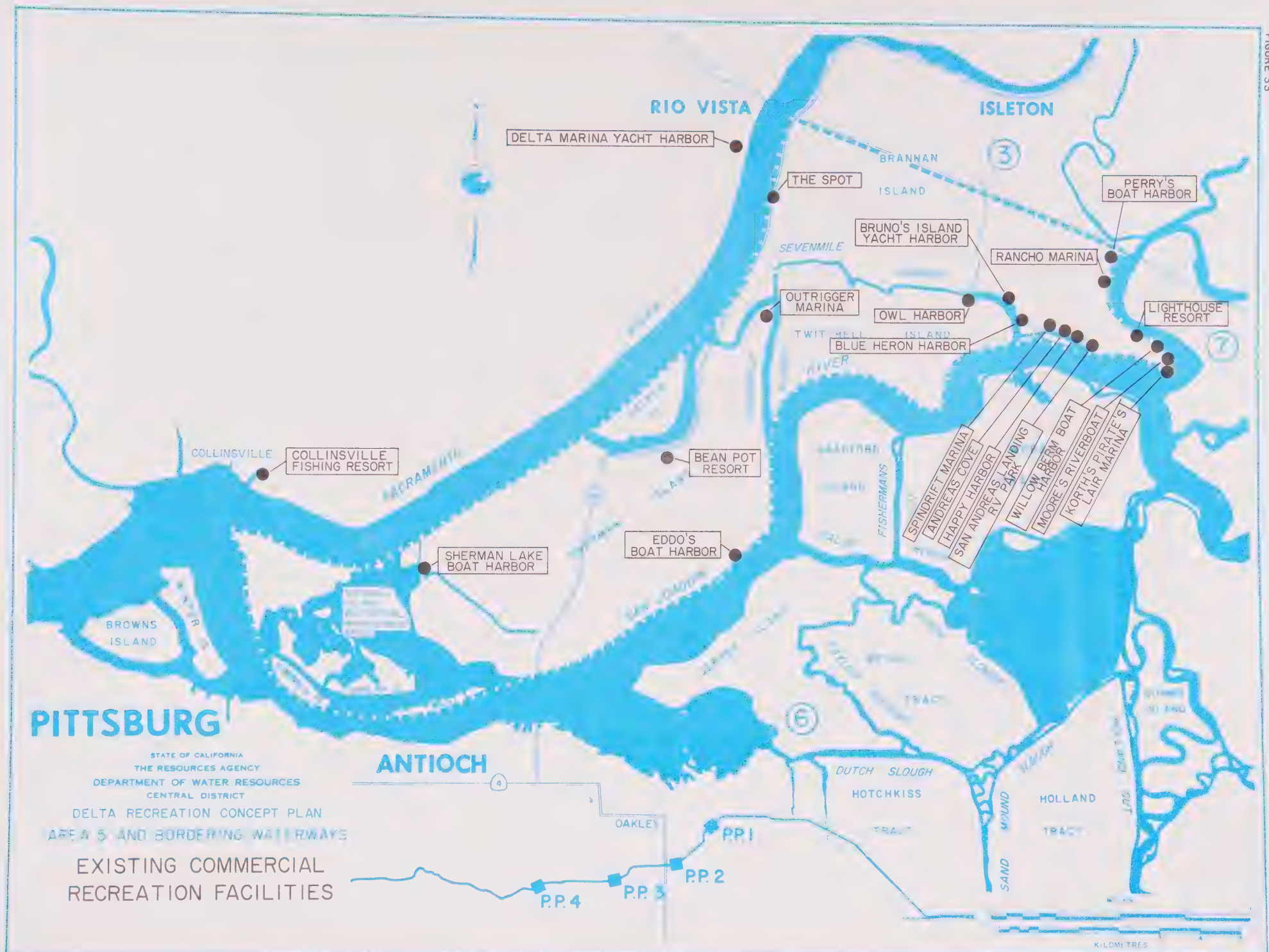
## AREA 5 AND BORDERING WATERWAYS

AREA 5	RECREATIONISTS
	TOTAL N
Brannan Island - South	834
Sherman Island	511
Threemile Slough	495
Sevenmile Slough	483
Sherman Island Waterfowl Management Area	403
Andrus Island - South	123
Decker Island	105
Twitchell Island	73
Collinsville	10
<hr/> BORDERING WATERWAYS <hr/>	
Sacramento River from Cache Slough South to Collinsville including Horseshoe Bend	2,200
San Joaquin River from the Mokelumne River to the Sacramento River	508
Mokelumne River from Highway 12 to the San Joaquin River	212

Table 36  
Recreation Activity - Area 5

Activity	Number of Recreation Activities	%
Bicycling	40	1.9
Photography	84	4.0
Water Skiing	68	3.2
Driving for Pleasure	205	9.7
Canoe-Kayak-Rowing	17	0.8
Picnicking	194	9.2
Sailing	45	2.1
Dirt Biking	18	0.9
Relaxing	273	12.9
Swimming	139	6.6
Sightseeing	189	8.9
Flying	7	0.3
Snorkeling/Scuba	5	0.2
Fishing	333	15.8
Hunting	13	0.6
Camping	211	10.0
Motorboating	263	12.4
TOTAL	2,113	100.0





EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

PERRY'S BOAT HARBOR

Commercial Marina

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- Mokelumne River

Facilities/Services:

- 122 covered berths
- one hoist
- guest dock for large & small crafts
- restrooms & showers
- boat engine & hull maintenance
- dry dock
- pumpout station
- paved parking for 500 to 600 vehicles
- supplies: ice, bait & marine supplies
- fuel: gas/oil, & diesel
- sells beer
- open year round, 7 days a week

RANCHO MARINA

Commercial Marina

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- Mokelumne River

Facilities/Services:

- 12 open berths
- two acres open dry storage
- 14 covered dry storage spaces
- overnight guest dock for large & small crafts
- restrooms & showers
- pumpout station
- laundromat
- 2 acres of car & RV camping: 12 sites with electricity, water, & sewer & 10 sites with water & sewer
- 25 picnic sites
- supplies: propane, bait/tackle, & marine supplies
- food: groceries & snack bar
- open year round & only Saturdays & Sundays

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

LIGHTHOUSE RESORT

Commercial Marina

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- Mokelumne River

Facilities/Services:

- 55 total berths (35 covered; 20 open day-use)
- 40 open dry storage spaces
- one launch ramp/2 lanes
- 750' overnight guest dock for large & small crafts
- restrooms & showers
- boat engine & hull maintenance
- pumpout station
- paved parking for 50 vehicles/unpaved parking for 100 vehicles
- 157 campsites (52 full hookups; 80 water/electricity; 25 tents/water): showers & restrooms
- picnic area
- clubhouse -- barbecues
- supplies: ice, propane, bait/tackle, & marine supplies

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

LIGHTHOUSE RESORT (Continued)

Facilities/Services:

- fuel: gas & oil
- food: restaurant, cocktail lounge, & take-out beer
- boat sales
- open year round

WILLOW BERM BOAT HARBOR

Commercial Marina

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- Mokelumne River

Facilities/Services:

- 198 covered berths
- 40 covered dry storage spaces
- gas dock
- unpaved parking for 200 vehicles
- 10 picnic tables on harbor
- supplies: ice
- fuel: gas/oil, & diesel
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

MOORE'S RIVERBOAT

Commercial Marina

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- Mokelumne River

Facilities/Services:

- 165 total berths (50 covered; 115 open)
- 460' overnight guest dock for large & small crafts
- restrooms & showers on boat
- boat engine & hull maintenance
- dry dock
- paved parking for 100 vehicles
- supplies: ice
- food: restaurant, cocktail lounge, & take-out beer
- closed November 30 through March 1, open 7 days a week

KORTH'S PIRATE'S LAIR MARINA

Commercial Marina

Location: Andrus Island

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

KORTH'S PIRATE'S LAIR MARINA  
(Continued)

Access:

Road -- Brannan Island Road

Waterway -- Mokelumne River

Facilities/Services:

- 208 covered berths
- one launch ramp
- overnight guest dock for large & small crafts
- restrooms
- laundromat
- paved parking for 200 vehicles
- rentals: 10 fishing boats -- 7 with motors & 3 without
- 48 pads for mobile homes
- supplies: ice, bait, & marine supplies
- fuel: gas & oil
- food: groceries & a restaurant which serves breakfast & lunch & is closed on Mondays & Tuesdays
- boat sales
- open year round, 7 days a week



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

SAN ANDREAS LANDING RV PARK

Commercial RV Park

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- San Joaquin River

Facilities/Services:

-- 17 RV monthly space rentals

HAPPY HARBOR

Commercial Marina

Location: San Andreas Island

Access:

Road -- Bethel Island Road

Waterway -- San Joaquin River

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

HAPPY HARBOR (Continued)

Facilities/Services:

- 28 total berths (8 covered; 20 open)
- 150' overnight guest dock for large & small crafts
- restrooms & showers
- laundromat
- paved parking for 50 vehicles
- 6 trailer sites
- supplies: ice
- food: restaurant & cocktail lounge
- open year round, closed Mondays & Tuesdays



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

ANDREAS COVE

Commercial Marina

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- San Joaquin River

Facilities/Services:

- 24 open berths
- one acre open dry storage
- overnight guest dock for 2 small crafts -- 1 barbecue
- restrooms & showers
- paved parking for 38 vehicles
- supplies: ice
- food: restaurant, beer/wine -- on premises & take-out
- open year round, closed Mondays & Tuesdays
- expansion plans: possible RV sites

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

SPINDRIFT MARINA

Commercial Marina

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- San Joaquin River

Facilities/Services:

- 148 total berths (109 covered; 39 open)
- 150' overnight guest dock for large & small crafts
- showers at dock & restrooms in restaurant
- paved parking for 60 vehicles & unpaved parking for 60 vehicles
- 47 mobile home monthly rentals
- supplies: ice, bait/tackle & marine supplies
- fuel: gas & oil
- food: groceries, snack bar, restaurant, cocktail lounge, take-out liquor
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

BLUE HERON HARBOR

Commercial Marina

Location: Andrus Island

Access:

Road -- Brannan Island Road

Waterway -- Sevenmile Slough

Facilities/Services:

- 68 total berths (25 covered; 43 open)
- 30 open dry storage spaces
- overnight guest dock for large & small crafts
- restrooms & showers
- paved parking for 40 vehicles
- 5 acres of unpaved parking
- rentals: 7 fishing boats (2 with motors; 5 without motors)
- 48 car & RV campsites: water (24 sites with electricity)
- 12 picnic tables at camp area
- supplies: ice & bait
- fuel: gas & oil
- food: take-out beer & wine
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

BRUNO'S ISLAND YACHT HARBOR

Commercial Marina

Location: Bruno's Island, between  
Andrus & Twitchell  
Islands

Access:

Road -- Brannan Island Road

Waterway -- Sevenmile Slough

Facilities/Services:

- 124 open berths
- guest dock
- restrooms & showers\*
- minor boat & motor repair\*
- pumpout station\*
- 9 acres of unpaved parking
- 4 picnic tables\*
- supplies: ice
- open year round, 7 days a week
- expansion plans: clubhouse,  
barbecues, laundromat & beer/liquor  
license

---

\* For customers who rent berths.

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

OWL HARBOR

Commercial Marina

Location: Twitchell Island

Access:

Road -- Private Road off Brannan  
Island Road

Waterway -- Sevenmile Slough

Facilities/Services:

- 12 covered berths
- 3 overnight guest docks for large &  
small crafts
- restrooms & showers
- 20 acres of unpaved parking
- open year round, 7 days a week
- expansion plans: 600 berths

EDDO'S BOAT HARBOR

Commercial Marina

Location: Sherman Island

Access:

Road -- Sherman Island Levee Road

Waterway -- San Joaquin River

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

EDDO'S BOAT HARBOR (Continued)

Facilities/Services:

- 75 total berths (20 covered; 55  
open)
- open dry storage area
- one launch ramp
- a gas dock which can accommodate  
boats overnight
- restrooms & showers
- boat engine maintenance
- unpaved parking for 100 vehicles
- rentals: 13 fishing boats without  
motors
- grass area where 50 to 75 cars &  
RV's may camp
- picnic area: 15 tables & 30  
barbecues at camping area
- supplies: ice, propane, &  
bait/tackle
- fuel: gas & oil
- food: beer & wine
- open year round, 7 days a week
- expansion plans: full camping  
facility

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

SHERMAN LAKE BOAT HARBOR

Commercial Marina

Location: Sherman Island

Access:

Road -- Sherman Island Road

Waterway -- Mayberry Slough

Facilities/Services:

- 35 open berths
- 2 open dry storage spaces
- 40' overnight guest dock for small crafts
- restrooms
- unpaved parking for 50 vehicles
- rentals: 6 rowboats
- 10 self-contained campsites
- supplies: ice & bait/tackle
- fuel: gas & oil
- food: limited groceries & take-out beer/wine
- open year round, 7 days a week
- expansion plans: covered berths & RV campsites

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

COLLINSVILLE FISHING RESORT

Commercial Marina

Location: Near Collinsville

Access:

Road -- Collinsville Road

Waterway -- Sacramento River

Facilities/Services:

- two covered berths
- 5 open dry storage spaces
- 10 moorings
- one launch ramp
- overnight guest dock for large & small crafts
- restrooms
- laundromat
- unpaved parking
- rentals: fishing boats
- 30 car & RV campsites: electricity, sewer & restrooms
- supplies: ice & bait/tackle
- fuel: gas & oil
- food: snack bar, cocktail lounge & beer bar
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

BEAN POT RESORT

Commercial Restaurant with Guest Dock

Location: Sherman Island

Access:

Road -- Highway 160

Waterway -- Horseshoe Bend

Facilities/Services:

- primarily restaurant facility
- guest dock for large & small crafts
- 1/2 acre partially paved area for parking
- supplies: ice
- food: restaurant (breakfast & lunch), beer bar, take-out liquor
- open year round, 7 days a week
- expansion plans: may reopen camping area (8-10 sites - electricity & water)

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

OUTRIGGER MARINA

Commercial Marina

Location: Sherman Island

Access:

Road -- Sherman Island Levee Road

Waterway -- Threemile Slough

Facilities/Services:

- 76 covered berths
- 3 overnight guest docks for large & small crafts
- restrooms & showers
- laundromat
- paved parking for 50 vehicles
- 10 car & RV self-contained campsites
- supplies: ice & bait
- fuel: gas & oil
- food: groceries, deli, & take-out beer & wine
- open 9 months, 7 days a week



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

THE SPOT

Commercial Marina

Location: Brannan Island

Access:

Road -- Highway 160

Waterway -- Sacramento River

Facilities/Services:

- guest dock for large & small crafts
- paved parking for 30 vehicles
- 18 car & RV campsites: electricity, water, sewer & restrooms
- picnic area: 6 tables & one barbecue
- supplies: ice & bait/tackle
- food: restaurant, take-out beer, cocktail lounge
- open year round, 7 days a week
- expansion plans: add dining room

DELTA MARINA YACHT HARBOR

Commercial Marina

Location: Near Rio Vista

Access:

Road -- Marin Drive

Waterway -- Sacramento River

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

DELTA MARINA YACHT HARBOR (Continued)

Facilities/Services:

- 250 total berths (200 covered; 50 open)
- one launch ramp
- one hoist
- 600' overnight guest dock for large & small crafts
- restrooms & showers
- boat engine & hull maintenance
- dry dock
- pumpout station
- laundromat
- unpaved parking for 275 vehicles
- 24 RV campsites: electricity, water, sewer, showers & restrooms
- two picnic areas for customers only
- supplies: ice, marine supplies
- food: restaurant & cocktail lounge\*
- boat sales
- open year round, 7 days a week

\* Restaurant - The Point (part of Delta Marina Yacht Harbor) has a 100' overnight guest dock.

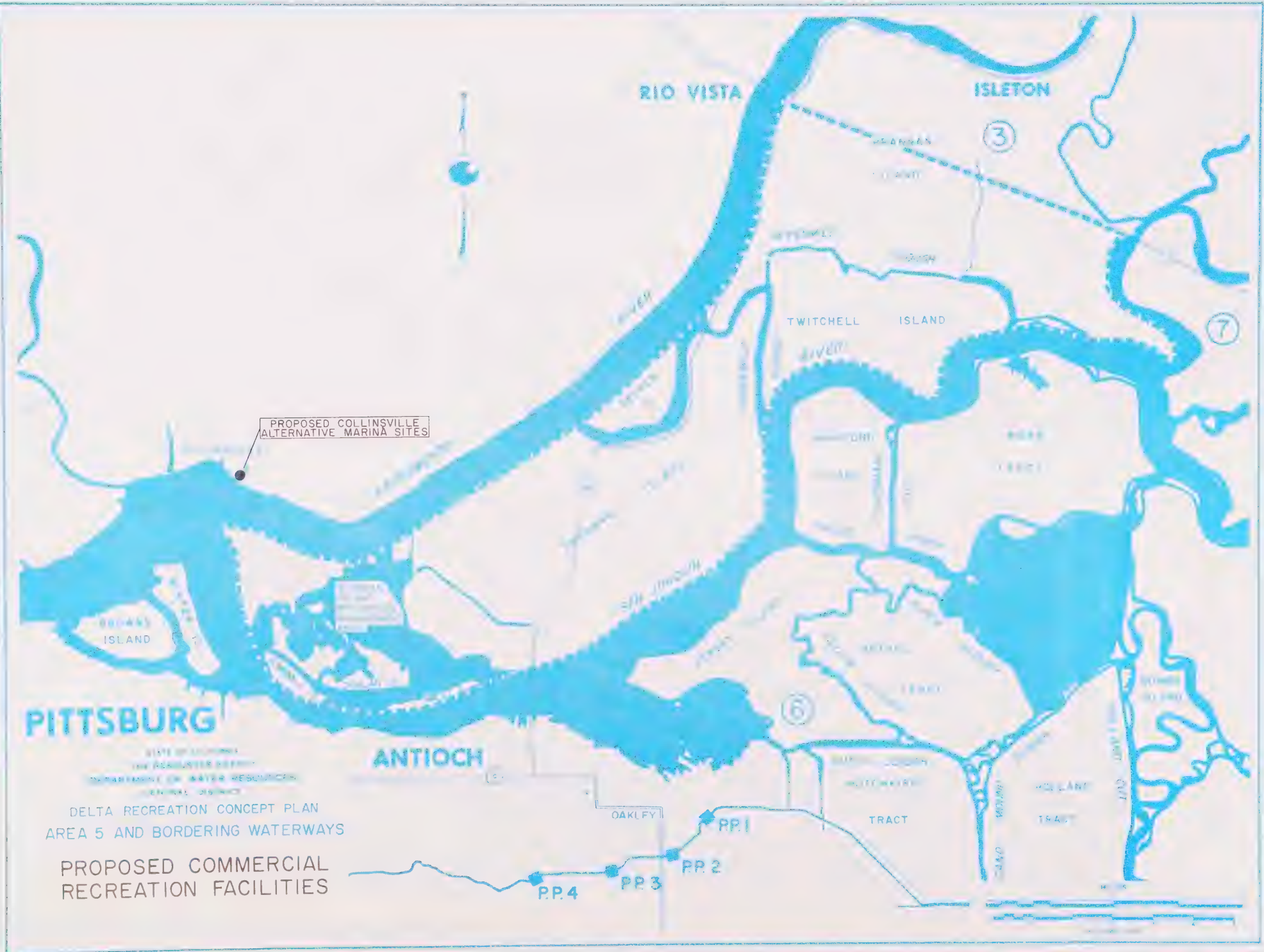


FIGURE 3.4

PROPOSED COMMERCIAL RECREATION  
FACILITIES - AREA 5

COLLINSVILLE

Solano County Planning Department helped prepare Collinsville-Montezuma Hills Area Plan and Program; an Amendment to the Southeastern Solano County General Plan. The primary function of this plan was to produce a land use and transportation configuration responsive to social, economic, ecological and aesthetic needs of Solano County and the Bay region.

The plan addressed Collinsville and its unique potentials for water-related recreational use:

The Collinsville subarea encompasses roughly 120 acres of lowland grassland and includes the Collinsville inlet and the old settlement of Collinsville. The Collinsville inlet was used to serve a dockside sugar beet refinery and cattle stockyard with river barge access. These operations are now defunct. The settlement of Collinsville forms the terminal focus of Collinsville Road. Once a small fishing community, it is now exclusively single-family residential with a number of vacant, dilapidated old homes which are remarkable for being built on piers several feet off the ground to avoid flooding waters.

Shoreline portions of the Collinsville subarea, including the existing settlement of Collinsville, are interspersed with isolated pockets of permanent and seasonal marsh. These lowland shore areas are noted for their habitat values, susceptibility to flooding, and poor soil stability. On the other hand, all interior lands

PROPOSED COMMERCIAL RECREATION  
FACILITIES - AREA 5 (Continued)

COLLINSVILLE (Continued)

of the subarea are underlain by stable soils and are not in the floodplain.

The Collinsville subarea has unique potentials for water-related recreational use due to its proximity to the Montezuma Slough and the convergence of the Sacramento and San Joaquin Rivers, and to the sheltering effects of Chain and Montezuma Islands from estuarine wave action. With the introduction of a primary loop road near the site for industrial purposes, regional access will be greatly improved, creating increased demands for water-oriented commercial recreation uses at this location.

Construction of a marina and the development of complementary, water-related commercial facilities are permissible at the Collinsville subarea. The area should be reserved for small-scale, water-oriented development. In addition to a marina, specific uses permitted should include restaurants, commercial lodging, retail shops to serve recreational uses of the area, boat sales, a boat-launching ramp, and facilities for boat construction and repair.

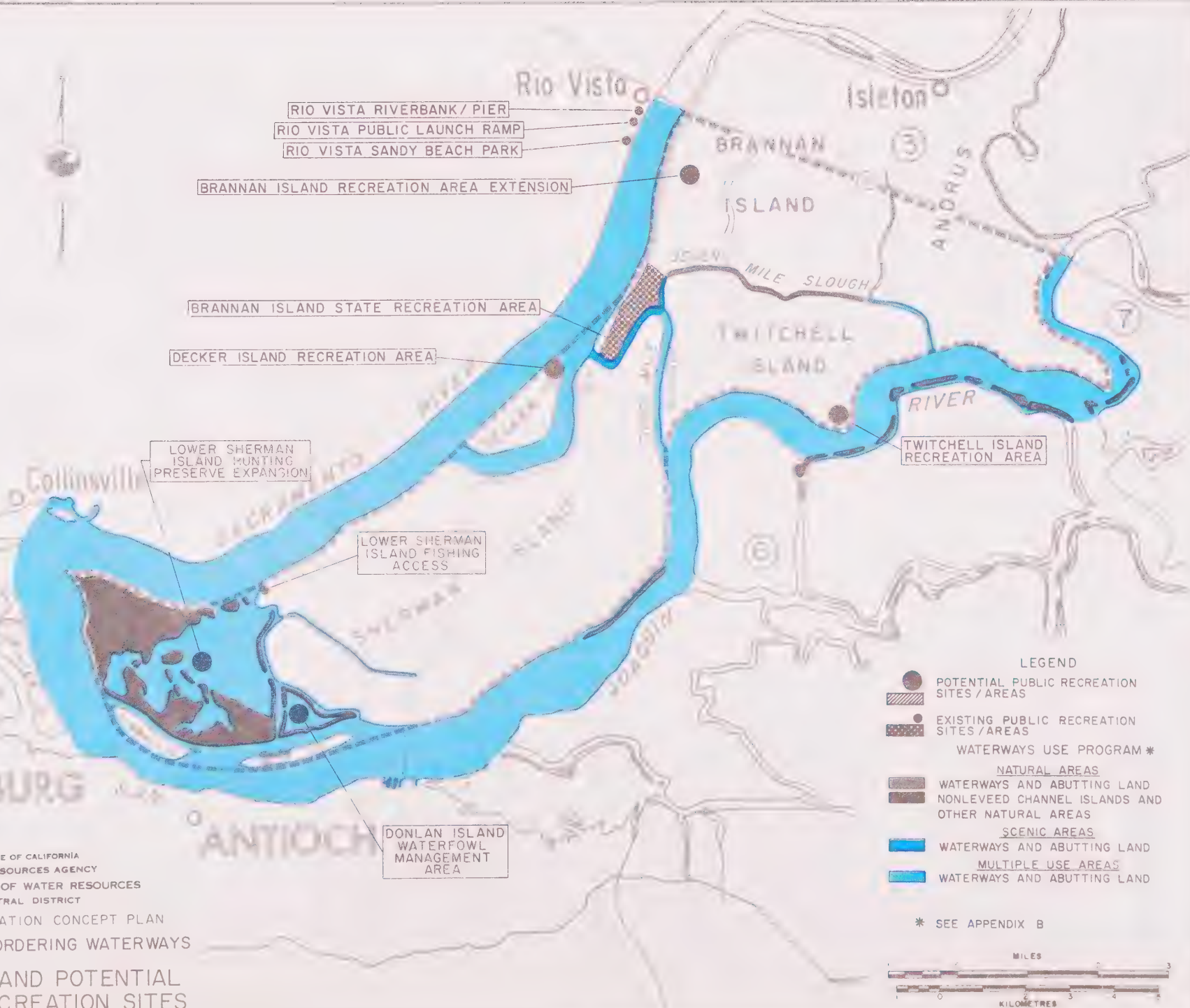
Although three possible alternative marina sites were discussed, the Collinsville inlet is the preferred location. Advantages of this site include more direct road access, fewer conflicts with wetlands, good storm protection for boats, less land access interference with industrial activities, and closer proximity to complementary commercial recreation development.



STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES  
CENTRAL DISTRICT

DELTA RECREATION CONCEPT PLAN  
AREA 5 AND BORDERING WATERWAYS

EXISTING AND POTENTIAL  
PUBLIC RECREATION SITES



EXISTING PUBLIC RECREATION FACILITIES  
AREA 5

RIO VISTA RIVERBANK/PIER

Operation/Maintenance: City of Rio  
Vista

County: Solano

Access:

Location -- Rio Vista

Road -- Front Street

Waterway -- Sacramento River

Facilities/Services:

-- 1-3/4 acres

-- parking for 25 vehicles

-- 3 barbecue pits

-- pier for fishing access\*: day/night  
fishing

-- restrooms

RIO VISTA PUBLIC LAUNCH RAMP

Operation/Maintenance: City of Rio  
Vista

County: Solano

Access:

Location -- Rio Vista

Road -- Front Street

Waterway -- Sacramento River

EXISTING PUBLIC RECREATION FACILITIES  
AREA 5 (Continued)

RIO VISTA PUBLIC LAUNCH RAMP  
(Continued)

Facilities/Services:

-- 3 acres

-- paved parking for vehicles

-- boat launch

-- restrooms

RIO VISTA SANDY BEACH PARK

Operation/Maintenance: Solano County  
Parks Department

County: Solano

Access:

Road -- Beach Drive

Waterway -- Sacramento River

The U. S. Army Corps of Engineers (COE) owns the property where Rio Vista Sandy Beach Park is located. This beach area was acquired in the 1930's and includes 342 acres. The primary use of the site has been the disposal of dredge material taken from the Sacramento River to maintain navigable depth.

The City of Rio Vista requested the Solano County Parks Department in 1970 to investigate the feasibility of establishing a park at this site which would include overnight camping. It became apparent to Solano County during its investigation of this site and alternative sites that the COE property offered the greatest potential for meeting recreation demand in the area.



EXISTING PUBLIC RECREATION FACILITIES  
AREA 5 (Continued)

RIO VISTA SANDY BEACH PARK (Continued)

Consequently, Solano County acquired a 25-year lease from COE and Rio Vista Sandy Park was developed containing the following:

- 42-car/RV campsites
- camp trailer waste dumpsite
- fresh water between every third campsite
- showers at campground
- 7-unit picnic area
- two lane launch ramp
- parking for 100 vehicles & 50 boat/trailer parking spaces
- beach area available for swimming and fishing; 1,440 linear feet of beach frontage
- paved roads
- two comfort stations
- outside shower
- entrance kiosk

Expansion plans for the park are currently being proposed:

- an additional comfort station
- a 14' slip which could accommodate two boats
- dredging an area to create a cul-de-sac, where boats could tie up and use barbecues. This would be developed in cooperation with the Department of Boats and Waterways.

EXISTING PUBLIC RECREATION FACILITIES  
AREA 5 (Continued)

BRANNAN ISLAND STATE RECREATION AREA

Operation/Maintenance: California  
Department of Parks and Recreation

County: Sacramento

Access:

Location -- Brannan Island  
(southernmost part)

Road -- Highway 160, 4 miles  
northeast of Antioch

Waterway -- Apex of the Sacramento  
and San Joaquin Rivers

Brannan Island SRA includes 335.7 acres of land at 25 feet mean elevation. The U. S. Army Corps of Engineers pumped spoil (sand and silt) into the area during dredging and widening of the Sacramento River channel in 1926-1929, raising ground level above the high water mark. In 1954, the State Water Resources Agency donated this very sandy land to the Department of Parks and Recreation. Development of Brannan Island SRA began a few years after land acquisition.

Facilities/Services:

- 6-lane launch ramp
- 1,000' swimming beach & day-use area
- 102 family campsites
- 6 group campsites/180-person capacity
- boat-in campground: 35 boat berths and 24 boat-in campsites
- picnic area: 130 tables

EXISTING PUBLIC RECREATION FACILITIES  
AREA 5 (Continued)

BRANNAN ISLAND STATE RECREATION AREA  
(Continued)

- group picnic area/200-person capacity
- 32-unit recreation vehicle rally site
- paved & unpaved parking for 576 vehicles
- restrooms

Interpretive programs at Brannan Island:

- two campfire programs a week during the summer session
- 2-3 nature walks a week
- "Water Safety and Survival Program"
- "Discovery Walk Program"
- Junior Ranger Programs: First aid, water safety, ecology, animal life, plant life, history, native Californias, and geology

A Brannan Island State Recreation Area Interpretive Prospectus was submitted to Department of Parks and Recreation January 1980. This interpretive prospectus which is preliminary and subject to revision covers the following subjects:

Historical Narrative, Biological Features, Physical Features and Recreation Resources. Approval is pending.

Department of Water Resources owns an inholding located on Brannan Island SRA. This land has been used periodically by the Corps of Engineers as a spoils site where sand is dumped after being

EXISTING PUBLIC RECREATION FACILITIES  
AREA 5 (Continued)

BRANNAN ISLAND STATE RECREATION AREA  
(Continued)

dredged from the Sacramento River. The spoils area is located at the north end of the park and to the west. ASTA Construction Company pays Department of Water Resources for sand it loads and trucks away (north spoil area). The spoil area to the west is rarely, if ever, used for its original purposes. Department of Parks and Recreation is interested in obtaining ownership of this section of spoil area, indicating it to be an excellent place for day-use camping.

RECOMMENDATION: Department of Parks and Recreation negotiate with Department of Water Resources to buy or lease this land for day-use camping.

LOWER SHERMAN ISLAND FISHING ACCESS

Operation/Maintenance: Sacramento County Department of Parks and Recreation

County: Sacramento

Access:

Location -- Sherman Island, southwestern tip of Sacramento County

Road -- Sherman Island Levee Road off Highway 160

Waterway -- Confluence Sacramento & San Joaquin Rivers

Facilities/Services:

- 5 acres
- launch ramp

EXISTING PUBLIC RECREATION FACILITIES  
AREA 5 (Continued)

LOWER SHERMAN ISLAND FISHING ACCESS  
(Continued)

- parking for 42 vehicles
- picnic facilities
- chemical restrooms
- day use only
- open year round

Rehabilitation of the launch ramp by Department of Boating and Waterways has been approved and should soon begin. Future unapproved expansion plans for Lower Sherman Island Fishing Access include: permanent restrooms, water supply and expanded parking lot.

POTENTIAL PUBLIC RECREATION SITES

AREA 5

Decker Island Recreation Area

Access:

Water Access Only - Sacramento River

- fishing
- picnicking
- swimming
- camping
- guest docking
- chemical toilets
- potable water
- trash receptacles

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 5 (Continued)

Proposed by: Army Corps of Engineers,  
Sacramento River Deep Water Channel  
(Dredge Material Disposal Site)

Twitchell Island Recreation Area

Access:

Brannan Island Road to Levee Road  
on Twitchell Island

- fishing
- picnicking
- swimming
- camping
- boat launching
- guest docking
- parking area
- restrooms/showers
- potable water
- pumpout station
- trash receptacles

Proposed by: Army Corps of Engineers,  
Sacramento River Deep Water Channel  
(Dredge Material Disposal Site)

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 5 (Continued)

Donlan Island Waterfowl Management Area

Access:

Water Access Only - San Joaquin River

-- preserve natural environment and  
wildlife habitat

-- waterfowl management area

Proposed by: U. S. Department of Fish  
and Wildlife

Lower Sherman Island Hunting Preserve  
Expansion

Access:

Water Access Only - Sacramento and San  
Joaquin Rivers

-- Expand Hunting Opportunities

Proposed by: California Department of  
Fish and Game

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 5 (Continued)

Brannan Island Recreation Area  
Extension

Access:

Highway 160

-- Extension of Existing Park  
Activities:

-- fishing

-- picnicking

-- swimming

-- camping

-- guest docking

-- parking area

-- restrooms/showers

-- pumpout station

Proposed by: Army Corps of Engineers,  
Sacramento River Deep Water Channel  
(Dredge Material Disposal Site)



AREA 6







Table 38

## RECREATION USE:

## AREA 6 AND BORDERING WATERWAYS

AREA 6	TOTAL RECREATIONISTS
	N
Bethel Island	1,649
Franks Tract	1,646
Piper and Taylor Sloughs	1,061
Sand Mound Slough	667
Big Break - Dutch Slough	518
Indian Slough	462
Fisherman's Cut	380
Holland Tract	254
Orwood Tract	243
False River	187
Quimby Island	169
Antioch	136
Clifton Court Forebay	134
Byron Tract	126
Rock Slough	124
Jersey Island	94
Holland Cut	91
Bradford Island	50
Webb Tract	42
Pittsburg	39
Hotchkiss Tract	37
Veal Tract	26

Table 38 (Continued)

## RECREATION USE:

## AREA 6 AND BORDERING WATERWAYS

AREA 6	TOTAL RECREATIONISTS
	N
Browns Island	10
Palm Tract	10
<hr/> BORDERING WATERWAYS <hr/>	
San Joaquin River from the Mokelumne River to the Sacramento River	508
Old River from San Joaquin River south to Highway 4	183
Old River from Highway 4 south to Grantline Canal	146

Table 39

## Recreation Activity - Area 6

Activity	Number of Recreation Activities	%
Bicycling	111	2.0
Photography	171	3.0
Water Skiing	354	6.3
Driving for Pleasure	389	6.9
Canoe-Kayak-Rowing	85	1.5
Picnicking	353	6.3
Sailing	130	2.3
Dirt Biking	64	1.1
Relaxing	651	11.6
Swimming	486	8.7
Sightseeing	426	7.6
Flying	16	0.3
Snorkeling/Scuba	12	0.2
Fishing	817	14.6
Hunting	45	0.8
Camping	498	8.9
Motorboating	1,004	17.9
TOTAL	5,612	100.0





EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6

RIVERVIEW LODGE

Commercial Restaurant with Guest Docks

Location: Antioch

Access:

Road -- "H" Street

Waterway -- San Joaquin River

Facilities/Services:

- 110' overnight guest dock for large & small crafts
- restrooms
- paved parking for 100 vehicles
- Food: restaurant/cocktail lounge -- take-out beer & wine
- open year round, 7 days a week

RODGERS POINT MARINA

Commercial Marina

Location: Antioch

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

RODGERS POINT MARINA (Continued)

Access:

Road -- Wilbur Road

Waterway -- San Joaquin River

Facilities/Services:

- 168 total berths (22 covered; 146 open)
- one overnight guest dock for large & small crafts
- restrooms
- trailer to haul out 16'-17' boats
- boat engine maintenance & repair
- dry dock: self-serve work area
- paved parking for 50 vehicles
- supplies: ice, bait/tackle, & marine supplies
- fuel: gas/oil, & diesel
- food: restaurant serving beer & wine; take-out beer
- open year round: summer -- closed Mondays; starting in August -- closed Mondays & Tuesdays

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

SAN JOAQUIN YACHT HARBOR

Commercial Marina

Location: Antioch

Access:

Road -- Wilbur Road

Waterway -- San Joaquin River

Facilities/Services:

-- 67 covered berths

-- restrooms & showers

-- unpaved parking for 200 vehicles

-- picnic area: 20 tables & one large  
barbecue

-- fuel: gas & oil

-- open year round, 7 days a week

LLOYD'S HOLIDAY HARBOR

Commercial Marina

Location: Antioch

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

LLOYD'S HOLIDAY HARBOR (Continued)

Access:

Road -- Wilbur Road

Waterway -- San Joaquin River

Facilities/Services:

-- 125 covered berths

-- 35 open dry storage spaces

-- 3 lifts (two travel lifts, one  
elevator) mostly for repair work

-- restrooms & showers

-- boat sales

-- boat engine & hull maintenance

-- dry dock

-- paved parking for 100 vehicles

-- supplies: ice & marine supplies

-- fuel: gas & oil

-- open year round, closed Sundays &  
Mondays

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

NEW BRIDGE MARINA

Commercial Marina

Location: Antioch

Access:

Road -- Wilbur Road

Waterway -- San Joaquin River

Facilities/Services:

- 220 total berths (207 covered, 13 open)
- restrooms & showers
- 40 small boat open dry storage spaces
- 3 overnight guest docks for large & small crafts
- yacht broker on premises
- boat engine maintenance; hull maintenance referred to Robbie's Marine
- laundromat
- paved parking for 100 vehicles
- electronics store
- marine sanitation store
- picnic area: 5 tables & swimming pool
- supplies: bait & tackle, marine supplies, & kerosene

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

NEW BRIDGE MARINA (Continued)

Facilities/Services: (Continued)

- fuel: gas/oil & diesel
- food: snacks, take-out beer & wine
- open year round, 7 days a week
- expansion plans: remodel & rebuild berths

DRIFTWOOD MARINA

Commercial Marina

Location: Near Antioch & Oakley

Access:

Road -- Bridgehead Road

Waterway -- San Joaquin River

Facilities/Services:

- 150 covered berths
- restrooms & showers
- two overnight guest docks for large & small crafts
- boat engine & hull maintenance
- parking area for 150 vehicles (40 spaces paved; 110 spaces unpaved)
- fuel: gas/oil, & diesel
- open year round, 7 days a week except business office closed Wednesdays, & fuel dock closed Tuesdays
- expansion plans: add 41 covered berths



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

S & H BOAT YARD

Commercial Boat Yard

Location: Near Antioch & Oakley

Access:

Road -- Bridgehead Road (Conlon Lane)

Waterway -- San Joaquin River

Facilities/Services:

- one hoist for boat repair service
- boat hull maintenance
- dry dock
- pumpout station\*
- unpaved parking for 15 vehicles & two boat trailers
- rentals: two houseboats
- fuel: gas & oil\*
- open year round: spring & summer (20 weeks) open 7 days a week; rest of year closed Saturdays & Sundays
- expansion plans: add boat sales & prop repair shop on end of building

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\* For houseboat rentals only.

LAURITZEN YACHT HARBOR

Commercial Marina

Location: Near Antioch

Access:

Road -- Bridgehead Road (Conlon Lane)

Waterway -- San Joaquin River

Facilities/Services:

- 137 total berths (116 covered; 21 open)
- 100 open dry storage spaces
- one launch ramp/two lanes
- 300' overnight guest dock for large & small crafts
- restrooms & showers
- laundromat
- paved parking for 50 vehicles
- picnic area: two tables
- supplies: ice
- fuel: gas & oil
- open year round, 7 days a week



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

BIG BREAK MARINA

Commercial Marina

Location: Near Oakley & Antioch

Access:

Road -- Big Break Road

Waterway -- Big Break

Facilities/Services:

- 332 total berths (142 covered; 190 open)
- restrooms & showers
- boat engine & hull maintenance
- dry dock
- 32 acres of both paved & unpaved parking
- RV camping for self-contained RV's in parking lot
- supplies: ice, bait/tackle, & marine supplies
- fuel: gas & oil
- food: restaurant, beer & wine -- on premises & take-out

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

BIG BREAK MARINA (Continued)

Facilities/Services: (Continued)

- open year round, closed Mondays
- expansion plans: add 160 covered berths

LEISURE LANDING MARINA

Commercial Marina

Location: Bethel Island

Access:

Road -- Taylor Road

Waterway -- Taylor Slough

Facilities/Services:

- 160 covered berths
- restrooms & showers
- unpaved parking for 150 vehicles
- supplies: ice & propane
- fuel: gas & oil
- food: restaurant, beer & wine -- on premises & take-out
- open year round, closed Mondays

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

ANCHOR MARINA

Commercial Marina

Location: Bethel Island

Access:

Road -- Taylor Road

Waterway -- Taylor Slough

Facilities/Services:

- 67 covered berths
- restrooms & showers
- unpaved parking for 20 vehicles
- picnic area only for customers who  
rent berths
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

MOZZETTI MARINE

Commercial Marina

Location: Bethel Island

Access:

Road -- Taylor Road

Waterway -- Taylor Slough

Facilities/Services:

- one elevator launch
- one hoist
- boat engine & hull maintenance
- dry dock
- unpaved parking for 6 vehicles
- open year round, 7 days a week
- expansion plans: remodel existing  
facilities & open a do-it-yourself  
dry dock boat repair yard

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

SEVEN BELLS HARBOR

Commercial Marina

Location: Bethel Island

Access:

Road -- Taylor Road

Waterway -- Taylor Slough

Facilities/Services:

-- 13 covered berths

-- restrooms

-- unpaved parking for 20 vehicles

-- renters can camp or picnic in parking  
area

-- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

FARRAR PARK HARBOR

Commercial Marina

Location: Bethel Island

Access:

Road -- Riverview Drive

Waterway -- Dutch Slough

Facilities/Services:

-- 100 total berths (99 covered; one  
open)

-- one travel hoist

-- restrooms & showers

-- boat engine & hull maintenance

-- dry dock

-- 1/2-acre unpaved parking

-- supplies: ice & marine supplies

-- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

BOB'S MARINA

Commercial Marina

Location: Bethel Island

Access:

Road -- Stone Road

Waterway -- Sand Mound Slough

Facilities/Services:

- 50 covered berths
- restrooms & showers
- unpaved parking for 50 vehicles
- fuel: gas & oil
- open year round, 7 days a week

FRANK'S MARINA

Commercial Marina

Location: Bethel Island

Access:

Road -- Riverview Drive

Waterway - Piper Slough

FRANK'S MARINA (Continued)

Facilities/Services:

- 75 total berths (46 covered; 29 open)
- 24 covered dry storage spaces
- 180'-200' overnight guest dock for 25 boats
- boat repair & hull maintenance
- one laundromat
- unpaved parking for 100 vehicles & boat trailers
- travel trailer campsite for 65 trailers -- water supply
- picnic area: 12 tables
- fuel: gas/oil, & diesel
- food: bar & restaurant
- open year round, 7 days a week
- expansion plans: add 50 more covered berths

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

RIVERVIEW MARINA

Trailer Court with Berths

Location: Bethel Island

Access:

Road -- Riverview Drive

Waterway -- Piper Slough

Facilities/Services:

- 10 open berths, priority use for customers renting trailer space
- 12 spaces for trailers
- paved parking adjacent to each trailer space, plus 2 extra spaces

DELTA RESORT

Commercial Marina

Location: Bethel Island

Access:

Road -- Riverview Drive

Waterway -- Piper Slough

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

DELTA RESORT (Continued)

Facilities/Services:

- 18 open berths
- 50 open dry storage spaces
- one launch ramp (double back down)
- one horseshoe-shaped & two outside overnight guest docks for large & small crafts
- unpaved parking for 75 vehicles & boat trailers, & 4 acres of field for parking
- 10 RV campsites: electricity, water, showers, restrooms
- 40 "numbered" campsites, plus room for 20 more overflow campsites with water, showers, & restrooms
- 20 picnic tables in campgrounds
- supplies: ice, bait/tackle
- food: snack bar (snacks, soft drinks, beer)
- open year round, 7 days a week



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

MARS HARBOR

Commercial Marina

Location: Bethel Island

Access:

Road -- Riverview Drive

Waterway -- Piper Slough

Facilities/Services:

- 16 covered berths
- overnight guest dock for large & small craft
- restrooms & showers
- unpaved parking for 8 vehicles
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

DONOVAN'S MARINA

Commercial Marina

Location: Bethel Island

Access:

Road -- Riverview Drive

Waterway -- Piper Slough

Facilities/Services:

- 21 covered berths
- showers & restrooms
- paved parking for 25 vehicles,  
2-1/2 acres of field for vehicles  
& trailers
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

SUGAR BARGE MARINA

Commercial Marina

Location: Bethel Island

Access:

Road -- Riverview Drive

Waterway -- Piper Slough

Facilities/Services:

- 38 total berths (30 covered; 8 open)
- overnight guest dock for large & small crafts
- restrooms & showers
- unpaved parking for vehicles & boat trailers in one acre field
- total space for 100 RV's & tents/cars (one acre field for RV's -- water; two acre field for tents/cars -- no water)
- picnic area in camping area: one table & one barbecue
- open year round, 7 days a week
- expansion plans: add dry storage & launching facilities

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

LAKEVIEW HARBOR

Commercial Marina

Location: Bethel Island

Access:

Road -- Riverview Drive

Waterway -- Piper Slough

Facilities/Services:

- 20 covered berths
- restrooms & showers
- paved parking for 20 vehicles
- 20 RV campsites: water & sewer
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

RUSSO'S MARINA

Commercial Marina

Location: Bethel Island

Access:

Road -- Piper Road

Waterway -- Piper Slough

Facilities/Services:

- 140 total berths (72 covered; 68 uncovered)
- 72 covered dry storage spaces
- one launch ramp
- one hoist/dolly
- overnight guest dock for approximately 25 small crafts
- restrooms & showers
- unpaved parking for 50 vehicles & boat trailers
- 25 car & RV campsites: electricity, water, showers & restrooms
- picnic area: 30 tables
- supplies: ice & bait/tackle
- fuel: gas & oil
- food: snack bar & beer bar
- open year round, 7 days a week
- expansion plans: enlarge dry storage area & expand camping area

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

BOYD'S HARBOR

Commercial Marina

Location: Bethel Island

Access:

Road -- Willow Road

Waterway -- Piper Slough

Facilities/Services:

- overnight guest docks for large & small crafts
- restrooms
- unpaved parking for 50 vehicles
- 10 car & RV campsites located in an open area
- picnic area: two tables
- supplies: ice, bait/tackle
- fuel: gas & oil
- food: groceries, snack bar, restaurant & beer/wine bar
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

BEACON HARBOR

Commercial Marina

Location: Bethel Island

Access:

Road -- North Willow Road

Waterway -- Piper Slough

Facilities/Services:

- 52 covered berths
- 150 covered dry storage spaces
- one hoist\*
- paved parking for 50 vehicles & boat trailers
- 30 campsites\*
- 5 picnic sites: two barbecues\*
- supplies: ice
- fuel: gas & oil
- open year round, closed on Tuesdays
- expansion plans: provide pumpout station in the event it is declared mandatory to do so & more dry storage spaces

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\* Available to customers who rent berths or dry storage space only.

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

BETHEL HARBOR

Commercial Marina

Location: Bethel Island

Access:

Road -- Harbor Road

Waterway -- Piper Slough

Facilities/Services:

- 136 total berths (85 covered; 51 open)
- 85 dry storage spaces (45 covered; 40 open)
- one elevator launch
- 10 overnight guest docks
- restrooms & showers
- laundromat
- unpaved parking for 50 vehicles & boat trailer spaces
- 30 RV campsites, electricity, water, sewer, showers, & restrooms
- two group picnic sites: two tables & 4 barbecues
- supplies: ice, bait/tackle
- fuel: gas & oil
- food: grocery store, beer
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

VIKING HARBOR

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Facilities/Services:

- 14 covered berths
- day-use guest dock for two 20' boats
- restrooms & showers
- boat sales
- paved parking on levee for 8 vehicles
- food: restaurant, beer & wine
- open year round, 7 days a week

GEMINI MARINA

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Facilities/Services:

- 10 covered berths
- unpaved parking for 10 vehicles
- open year round, 7 days a week



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

RIVERS HARBOR

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Facilities/Services:

- 14 covered berths
- restrooms & showers
- unpaved parking for 12 vehicles
- open year round, 7 days a week

HARRIS MARINA

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Facilities/Services:

- 29 covered berths
- restrooms
- 10 open dry storage spaces

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

Facilities/Services: (Continued)

- unpaved parking for 30 vehicles
- 23 RV/trailer campsites: restrooms, showers (electricity & water at 1/2 of the sites)
- open year round, 7 days a week
- expansion plans: add barbecue pit, picnic tables, weekend-type trailer court with sewer/electricity/water hookup for each site

SEA HORSE MARINA

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Facilities/Services:

- 12 total berths (6 covered; 6 open)
- guest dock for large & small crafts
- restrooms
- paved parking for 8 vehicles
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

RICHARD'S YACHT CENTER

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Facilities/Services:

- berths for boat sales only
- engine maintenance
- boat sales
- unpaved parking for 25 vehicles
- rentals: 7 houseboats
- supplies: propane
- fuel: gas & oil
- food: snack bar
- open year round, 7 days a week

MARINE EMPORIUM

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Bethel Island Road

Waterway -- Dutch Slough

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

MARINE EMPORIUM (Continued)

Facilities/Services:

- lift hoist
- 400' dock (200' used for boat sales; 200' for customer day-use for large & small crafts)
- restrooms
- boat sales
- dry dock facilities for 125 boats (1/2 of the space used for Marine Emporium service, & the other 1/2 used for customers to work on their boats)
- engine & hull maintenance
- paved parking for 35 vehicles
- fuel: oil
- supplies: ice, propane, bait/tackle, & marine supplies
- food: liquor store selling snacks & liquor.
- open year round, 7 days a week
- expansion plans: another hoist, remodel sales store, triple size of customer day-use docks (600'), add showroom for boat sales

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

LAZY DAYS HOUSEBOATS

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Bethel Island Road

Waterway -- Dutch Slough

Facilities/Services:

- boat sales
- boat & motor repair on boat sales
- unpaved parking for 100 vehicles
- rentals: 13 houseboats & one 12' fishing boat
- supplies: propane & marine supplies for boat sales
- fuel: gas & oil for rentals
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

REMSBURG'S HARBOR

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Facilities/Services:

- 44 covered berths
- restrooms & showers
- two unpaved parking lots
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

HENNIS MARINA

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough

Waterway -- Dutch Slough

Facilities/Services:

- 6 overnight guest docks for large or small crafts (28' limit)
- restrooms & showers
- engine & hull maintenance
- paved parking for 30 vehicles & boat trailers; unpaved parking for 50 vehicles & boat trailers
- campsites for 6 RV's, cars, or tents
- picnic area: 3 tables
- supplies: marine supplies (equipment for boat repair)
- open year round, 7 days a week

DOC'S MARINA

Commercial Marina & Trailer Court

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Facilities/Services:

- 7 covered berths
- showers & restrooms
- pumpout station
- 10 trailer spaces (9 monthly rental & one for weekend rental) -- sewage, water, electricity
- unpaved parking (one space per trailer)
- picnic area: two tables and one barbecue
- supplies: ice & propane
- fuel: gas & oil
- food: snacks, take-out beer & wine
- open year round, except for winter vacation, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

GREG'S MOTEL AND HARBOR

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Wells Road

Waterway - Dutch Slough

Facilities/Services:

- 16 covered berths
- 3 overnight guest docks
- restrooms & showers
- laundromat
- rentals: 9 cabins
- 3 RV campsites: electricity, water & sewer
- picnic area: 5 tables & one barbecue
- food: soda machine

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

GREG'S MOTEL AND HARBOR (Continued)

Facilities/Services: (Continued)

- open year round, 7 days a week
- expansion plans: grocery store

WOODS YACHT HARBOR

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Wells Road

Waterway -- Dutch Slough

Facilities/Services:

- 64 covered berths
- restrooms & showers
- unpaved parking for 100 vehicles
- open year round, 7 days a week



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

EDGEWATER HARBOR

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Sand Mound Slough Road

Waterway -- Sand Mound Slough

Facilities/Services:

- 15 covered berths
- restrooms & showers
- unpaved parking for 10 vehicles
- open year round, 7 days a week

CAROL'S HARBOR

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Sand Mound Road

Waterway -- Sand Mound Slough

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

CAROL'S HARBOR (Continued)

Facilities/Services:

- 11 open berths
- 14 covered dry storage spaces
- one hoist
- two overnight guest docks for small or large crafts
- restrooms & showers
- boat sales
- boat engine repair
- unpaved parking for 75 vehicles & boat trailers
- rentals: 11 open fishing boats
- picnic area: 4 tables & two barbecues
- supplies: ice, bait & tackle, & marine supplies
- fuel: gas & oil
- food: snack bar (snacks, beer -- on premises & take-out)
- proposed schedule: closed November through January, & closed Wednesdays

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

SAM'S HARBOR

Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Sand Mound Road

Waterway -- Sand Mound Slough

Facilities/Services:

- 26 total berths (23 covered; 3 open for houseboats)
- one overnight guest dock for one large craft or two small crafts
- restrooms & showers
- unpaved parking for 20 vehicles in a field
- campsite with water for cars, tents, or RV's
- picnic area: 3 tables & one barbecue
- supplies: ice & bait
- fuel: gas & oil
- food: snack bar (sandwiches, beer - on premises & take-out)
- open year round, closed Mondays

HOLLAND RIVERSIDE MARINA

Commercial Marina

Location: Holland Tract

Access:

Road -- Delta Road

Waterway -- Old River

Facilities/Services:

- 288 total berths (200 covered, 88 open)
- one launch ramp/two lanes
- two overnight guest docks for large & small crafts
- restrooms & showers
- pumpout station
- laundromat
- 1/2 mile of unpaved parking
- supplies: ice, propane & bait/tackle
- fuel: gas & oil
- food: snacks & takeout beer
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

ORWOOD RESORT

Commercial Marina

Location: Orwood Tract

Access:

Road -- Bixler Road

Waterway -- Werner Cut

Facilities/Services:

- 50 total berths (47 covered; 3 open)
- 3 acres open dry storage area
- one launch ramp/two lanes
- water dumping rack for boats
- two overnight guest docks for large & small crafts
- restrooms & showers
- unpaved parking for 300 vehicles
- rentals: 5 fishing boats without motors, ski equipment & fishing equipment
- 500 car & RV campsites: water & dump station
- picnic tables & barbecues
- supplies: ice, propane & bait/tackle
- fuel: gas & oil
- food: groceries, restaurant & beer bar
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

CRUISER HAVEN

Commercial Marina

Location: Orwood Tract

Access:

Road -- Orwood Road

Waterway -- Old River

Facilities/Services:

- 300 covered berths
- 1/4 mile long & 70' wide open dry storage area
- overnight guest dock for large & small crafts
- restrooms & showers
- laundromat
- 3 acres of unpaved parking
- supplies: ice
- fuel: gas & oil
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

DISCOVERY BAY DEVELOPMENT

Commercial Community Development

Location: Byron Tract

Access:

Road -- Highway 4

Waterway -- Indian Slough

Facilities/Services:

- Discovery Bay Marina
- Willow Lake with public access
- Tennis and Racquet Club open to public membership: 8 tennis courts, barbecues, putting green, pool, recreation room, jacuzzi, sauna, exercise room
- expansion plans: 18-hole public golf course, neighborhood parks, 20-acre regional park, commercial marina with boat repair, dry storage, fuel dock, guest docks, launch ramp with 4 lanes, coffee shop, small store selling bait/tackle & small equipment, pumpout station, 100 paved parking spaces for vehicles & boat trailers, 175 berths for houseboats, & parking area

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

DISCOVERY BAY MARINA

Commercial Marina

Location: Byron Tract

Access:

Road -- Highway 4

Waterway -- Indian Slough

Facilities/Services:

- two overnight guest docks for large and crafts
- launch ramp
- pumpout station
- paved parking for 25 vehicles
- supplies: marine supplies, water ski equipment
- fuel: gas & oil
- food: ice, snacks
- water ski school
- plan to move to new commercial marina s  
Discovery Bay Development

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

LAZY-M-MARINA

Commercial Marina

Location: Byron Tract

Access:

Road -- Clifton Court Road

Waterway -- Italian Slough

Facilities/Services:

- 25 open berths
- 500 open dry storage spaces
- one launch ramp/two lanes
- overnight guest dock for large & small crafts
- restrooms
- 10 acres of unpaved parking
- rentals: ski equipment
- 500 car & RV campsites
- picnic area
- supplies: ice, propane, & bait
- fuel: gas & oil
- food: groceries
- boat sales
- open year round, 7 days a week
- expansion plans: boat launch, restrooms & hookups at campsites



FIGURE 38



PROPOSED COMMERCIAL RECREATION  
FACILITIES - AREA 6

PROPOSED COMMERCIAL RECREATION  
FACILITIES - AREA 6 (Continued)

PRINCE HARBOR

Proposed Commercial Marina

Location: Hotchkiss Tract

Access:

Road -- Dutch Slough Road

Waterway -- Dutch Slough

Proposed Facilities/Services:

- 71 covered berths
- 100 dry storage spaces
- one travel hoist
- one overnight guest dock for large & small crafts
- boat hull maintenance service
- paved parking for 100 vehicles & boat trailers
- picnic area: 25 tables
- supplies: ice, propane, bait & tackle, & marine supplies (including ship parts)
- food: restaurant & cocktail lounge
- open year round, 7 days a week

MARINA DE LA PLAYA

Proposed Commercial Marina

Location: Bethel Island

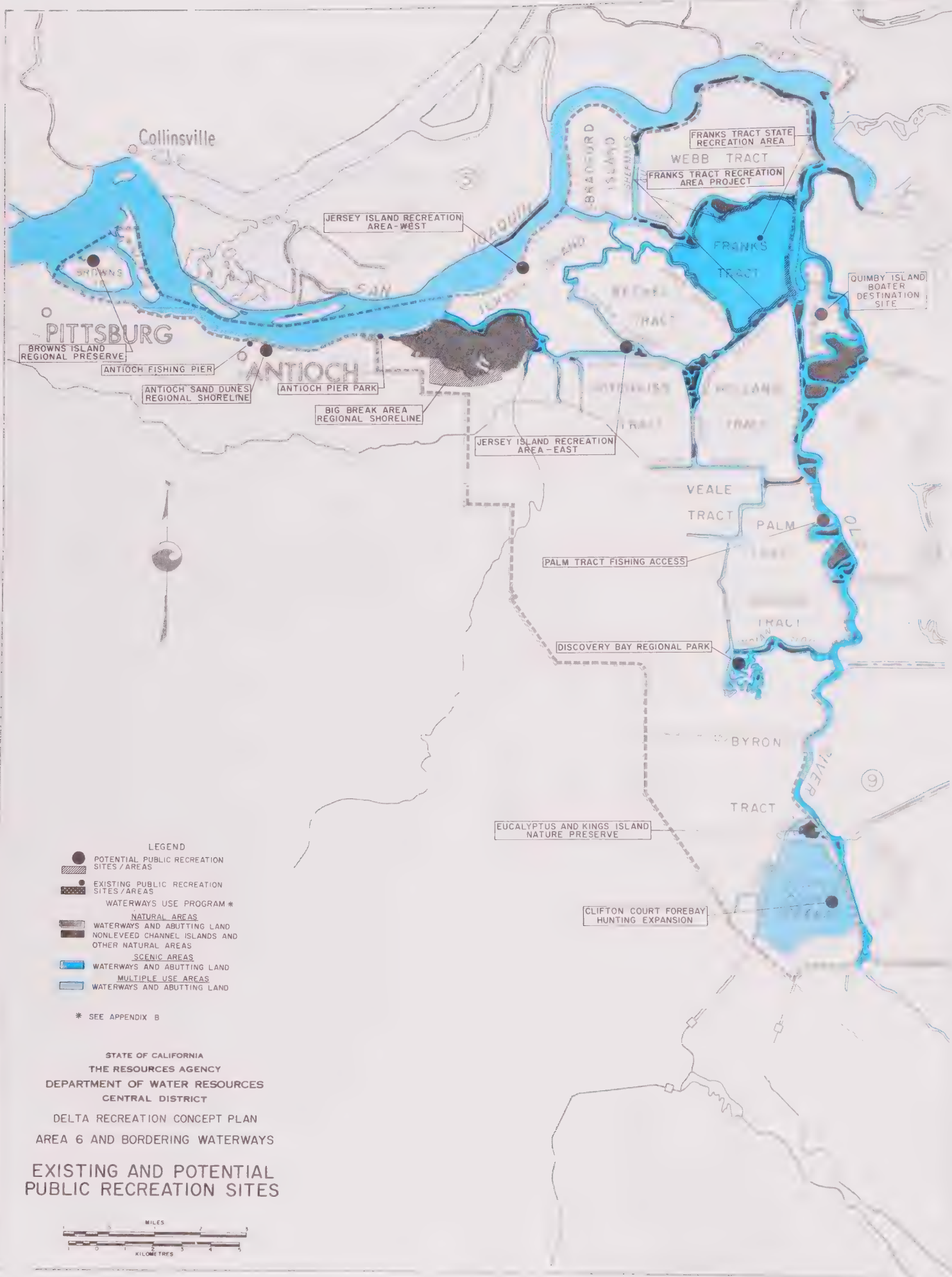
Access:

Road -- Willow Road West

Waterway -- Piper Slough

Proposed Facilities/Services:

- 97 berths, grouped in units of 10 (except one group of 7)
- 10 docks
- 12.87-acre park & boat-launching facility to be dedicated to Bethel Island Municipal Improvement District, to be operated for public use





EXISTING PUBLIC RECREATION FACILITIES  
AREA 6

FRANKS TRACT STATE RECREATION AREA

Operation/Maintenance: California  
Department of Parks and Recreation

County: Contra Costa (west-central  
portion of Delta, in northwest corner  
of Contra Costa County)

Access:

Water access only -- bordered on north  
by False River with Bradford Island  
and Webb Tract beyond, west by Piper  
Slough and Jersey Island, southwest by  
Piper Slough and Bethel Island,  
southeast by Sandmound Slough and  
Holland Tract, and east by Old River  
and Mandeville Island

Franks Tract SRA includes 3,507.52 acres  
of land, most of which was inundated by  
flood and tidal action which broke the  
levees in 1938. Except for 330 acres  
reclaimed after the flood, it became a  
lake with varying depth of 3 to 10 feet  
at low tide and 9 to 16 feet at high  
tide. The entire area is popular with  
water enthusiasts for fishing, boating  
and water skiing. The water throughout  
Franks Tract contains many hazards:  
snags of old trees, tree stumps and  
inundated farm machinery, making boating  
hazardous at tide levels when these  
obstacles are just below the water  
level. There is very little development  
at Franks Tract SRA.

Animal life in the area includes beaver,  
muskrat, waterfowl of all types, the  
rare white-tailed kite and pheasant.

EXISTING PUBLIC RECREATION  
FACILITIES - AREA 6 (Continued)

FRANKS TRACT STATE RECREATION AREA  
(Continued)

The 330-acre parcel in the northwest  
corner still protected from flooding is  
commonly referred to as "Little Franks  
Tract" and is used as a natural preserve  
area.

Here there is a floating dock for six  
boats, a ferry slip and a pumphouse  
sheltering a 20-HP pump used to drain  
the island to prevent excessive  
loading of the existing marshy  
terrain.

ANTIOCH FISHING PIER

Operation/Maintenance: City of  
Antioch

County: Contra Costa

Access:

Location -- City of Antioch

Road -- Foot of "H" Street off  
Wilbur Road

Waterway -- San Joaquin River

Facilities/Services:

- 19 acres
- 500' long & 14' wide pier
- paved parking
- restrooms

EXISTING PUBLIC RECREATION FACILITIES  
AREA 6 (Continued)

ANTIOCH PIER PARK

Operation/Maintenance: City of  
Antioch

County: Contra Costa

Access:

Location -- City of Antioch

Road -- Bridgehead Road off Highway  
160

Waterway -- San Joaquin River

Facilities/Services:

-- fishing pier

-- paved parking

-- restrooms

PROPOSED PUBLIC RECREATION FACILITIES  
AREA 6

BROWNS ISLAND

Operation/Maintenance: East Bay  
Regional Park District (EBRPD)

County: Contra Costa

Access:

Water access only -- island is  
surrounded on the south by New York  
Slough, on the northeast by Middle  
Slough, & northwest by Sacramento  
River

East Bay Regional Park District  
(EBRPD) owns the majority of Browns  
Island. Port of Stockton owns 100  
acres located in the center. The  
EBRPD's portion of the island is  
referred to as a land bank, in that  
the land has been acquired but is not  
open officially to the public.  
Presently, the island is considered a  
natural preserve which has a small  
dock and group interpretive talks  
based out of Pittsburg. EBRPD is  
attempting to buy the center 100 acres  
from the Port of Stockton and create a  
regional preserve on Browns Island.



POTENTIAL PUBLIC RECREATION SITES

AREA 6

Jersey Island Recreation Area - West

Access:

Jersey Island Road

- fishing
- picnicking
- swimming
- camping
- boat launching
- guest docking
- parking area
- restrooms/showers
- potable water
- pumpout station
- trash receptacles

Proposed by: Army Corps of Engineers,  
Stockton Deep Water Channel (Dredge  
Material Disposal Site)

Jersey Island Recreation Area - East

Access:

Jersey Island Road

- fishing
- picnicking
- camping
- guest docking
- parking area
- chemical toilets
- potable water
- trash receptacles

Palm Tract Fishing Access

Access:

Orwood Road to Levee Road

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 6 (Continued)

Palm Tract Fishing Access (Continued)

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Browns Island Nature Preserve

Access:

Water access only - Sacramento and  
San Joaquin Rivers

- preserve natural environment
- interpretive services
- nature trails

Proposed by: East Bay Regional Park  
District

Big Break Area Regional Shoreline

Access:

Highway 4

- fishing
- picnicking
- swimming
- camping
- parking area
- restrooms/showers
- potable water
- pumpout station
- trash receptacles

Previously Proposed by: East Bay  
Regional Park District

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 6 (Continued)

Franks Tract Recreation Area

Access:

Water Access Only

Create islands out of old levees for  
boater destination sites:

- fishing
- picnicking
- swimming
- chemical toilets
- trash receptacles

Antioch Sand Dunes Regional Shoreline

Access:

Highway 4

- preserve natural environment

Proposed by: East Bay Regional Park  
District

Discovery Bay Commercial Community  
Development

Access:

Highway 4

Regional Park:

- fishing
- picnicking
- swimming
- parking area
- restrooms
- potable water

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 6 (Continued)

Clifton Court Forebay

Access:

Highway 4

- increase hunting opportunities

Proposed by: California Department  
of Fish and Game

Quimby Island Boater Destination Site

Access:

Water Access Only - Old River

- picnicking
- swimming
- trails
- guest docking
- chemical toilets
- trash receptacles

Eucalyptus and Kings Island Nature  
Preserve

Access:

Water Access Only - Old River

- preserve natural environment

Proposed by: Army Corps of Engineers,  
Sacramento-San Joaquin Delta  
Investigation



AREA 7



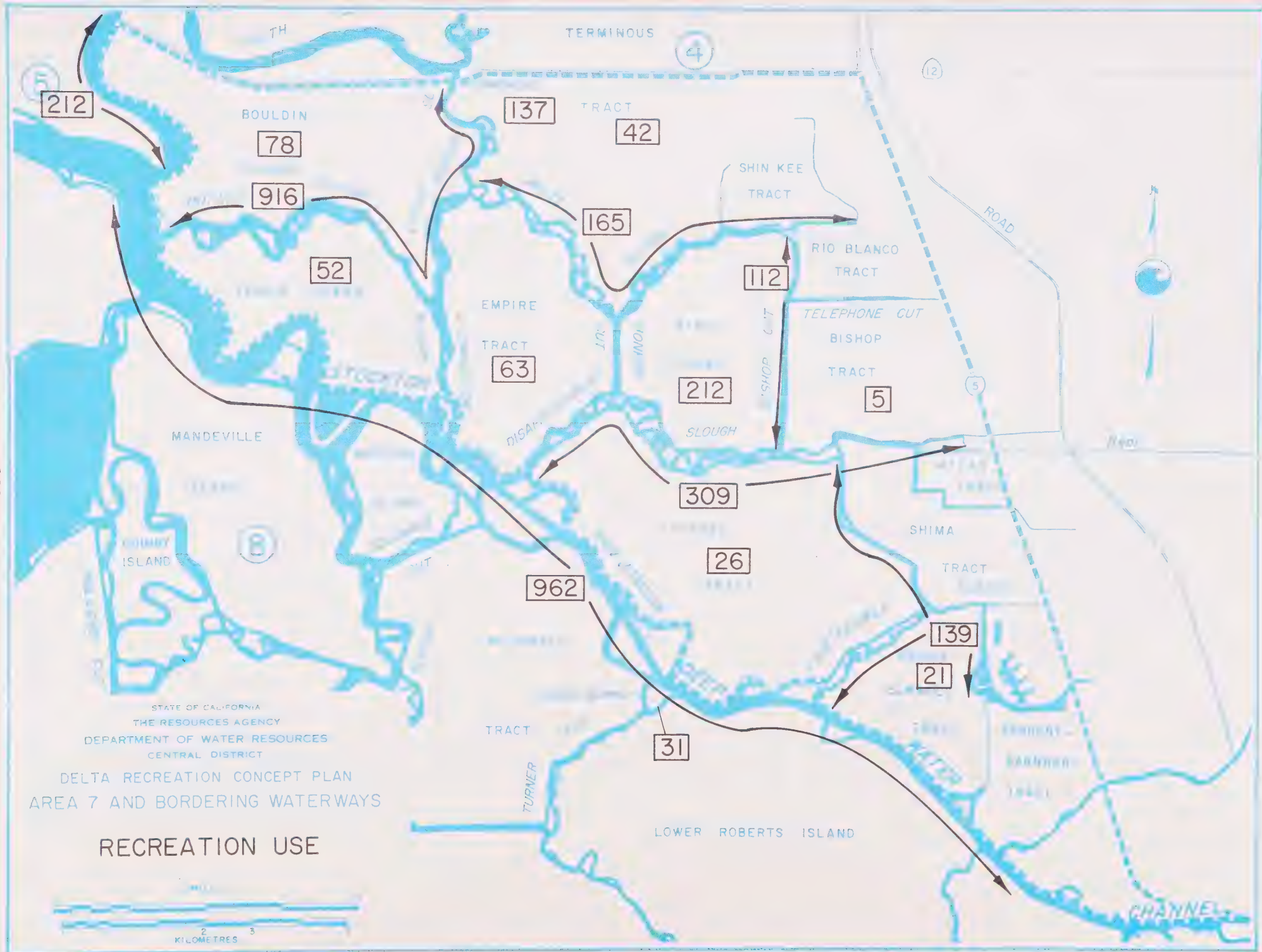


FIGURE 40



Table 40

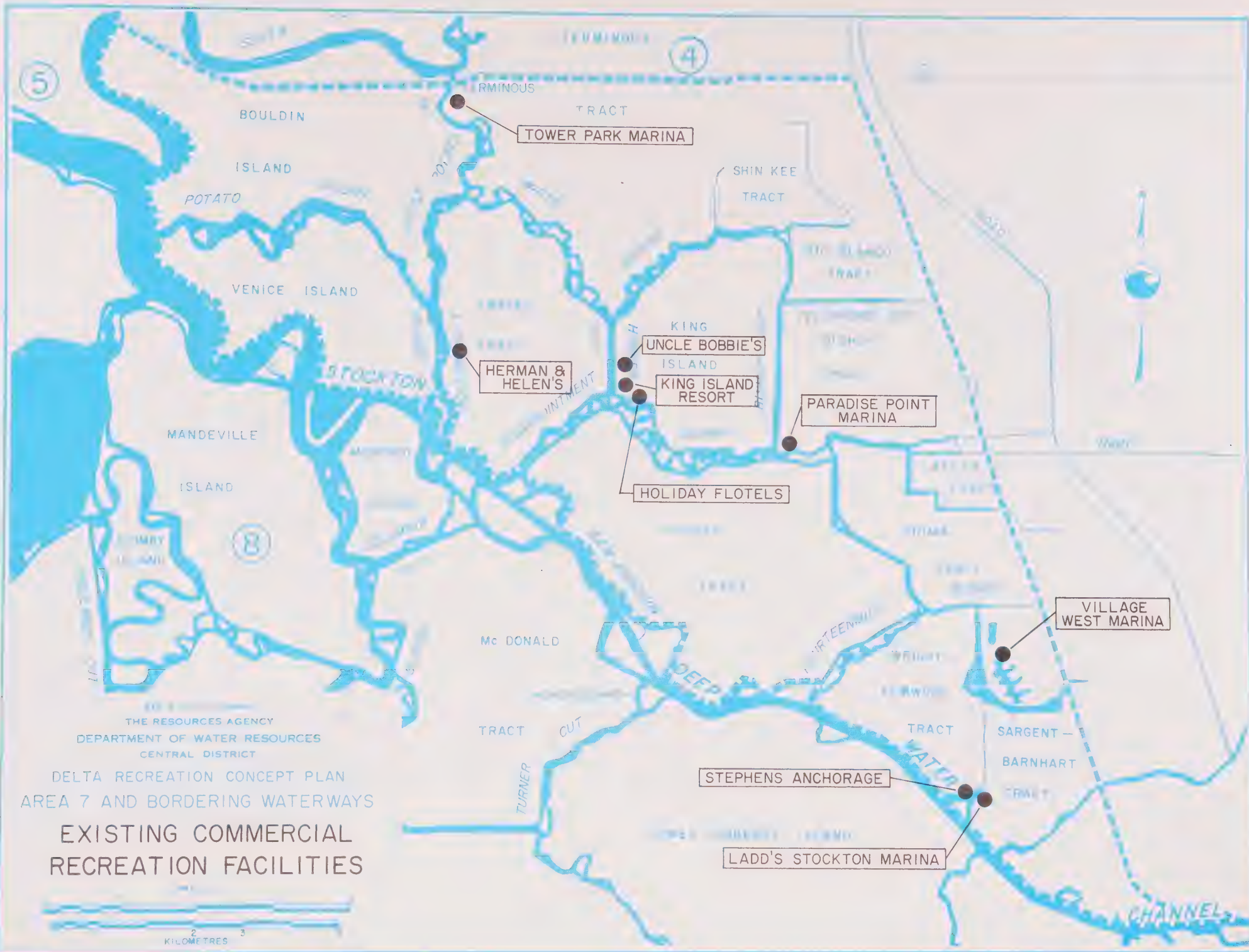
## RECREATION USE:

## AREA 7 AND BORDERING WATERWAYS

AREA 7	TOTAL RECREATIONISTS
	N
Potato and Little Potato Sloughs	916
Disappointment Slough	309
King Island	212
White Slough	165
Fourteenmile Slough	139
Terminus	137
Bishop Cut	112
Bouldin Island	78
Empire Tract	63
Venice Island	52
Terminus Tract - South	42
Acker Island	31
Rindge Tract	26
Wright-Elmwood Tract	21
Bishop Tract	5
<hr/> BORDERING WATERWAYS <hr/>	
San Joaquin River and Stockton Deep Water Channel from Mokelumne River to Highway 4, including Burns Cutoff	962
Mokelumne River from Highway 12 to San Joaquin River	212

Table 41  
Recreation Activity - Area 7

Activity	Number of Recreation Activities	%
Bicycling	13	0.8
Photography	60	3.8
Water Skiing	95	6.0
Driving for Pleasure	105	6.6
Canoe-Kayak-Rowing	10	0.6
Picnicking	97	6.1
Sailing	16	1.0
Dirt Biking	8	0.5
Relaxing	194	12.2
Swimming	117	7.4
Sightseeing	140	8.8
Flying	5	0.3
Snorkeling/Scuba	9	0.6
Fishing	231	14.5
Hunting	7	0.4
Camping	183	11.5
Motorboating	300	18.9
TOTAL	1,590	100.0



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7

TOWER PARK MARINA

Commercial Marina

Location: Terminus

Access:

Road -- Highway 12

Waterway -- Little Potato Slough

Facilities/Services:

- 178 total covered berths (126 day-use)
- 280 dry storage spaces (130 covered; 150 open)
- one hoist for repair work
- one elevator
- overnight guest dock for large & small crafts
- restrooms & showers
- boat engine & hull maintenance
- dry dock
- pumpout station
- paved parking for 500 vehicles (300 covered; 200 open)
- rentals: 2 patio boats, 7 fishing boats, 6 canoes & fishing equipment
- 250 car & RV campsites: electricity water, sewer, showers, & restrooms
- laundromat

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7 (Continued)

TOWER PARK MARINA (Continued)

Facilities/Services: (Continued)

- 6 picnic tables on levee
- supplies; ice, propane, bait/tackle & marine supplies
- fuel: gas/oil & diesel
- food: grocery store, restaurant, take-out liquor, & cocktail lounge
- boat & ski equipment sales
- open year round, 7 days a week
- expansion plans: will eventually develop interior of warehouses for services such as restaurants, etc.

UNCLE BOBBIE'S

Commercial Marina

Location: King Island

Access:

Road -- Atherton Road

Waterway -- Honker Cut

Facilities/Services:

- 106 total berths (36 covered; 70 open)
- boat bottom scrubber
- approximately 100 unpaved spaces for vehicles
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7 (Continued)

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7 (Continued)

KING ISLAND RESORT

Commercial Marina

Location: King Island

Access:

Road -- Atherton Road

Waterway -- Honker Cut

Facilities/Services:

- 205 total berths (185 covered, 20 open)
- 200 open dry storage spaces for small boats & trailers
- overnight docking facilities for large & small crafts
- restrooms
- pumpout station
- unpaved parking for 50 vehicles & 30 boat trailers
- rentals: 4 skiboats, 22 houseboats & 11 fishing boats
- one picnic area: 12 tables
- supplies: ice, propane, bait/tackle & limited marine supplies
- fuel: gas & oil
- food: groceries, snack bar, & beer bar
- boat sales
- open year round, 7 days a week

HOLIDAY FLOTELS

Commercial Marina

Location: King Island

Access:

Road -- West Eightmile Road

Waterway -- Disappointment Slough

Facilities/Services:

- 41 open berths
- boat engine maintenance on own boats
- pumpout station
- large grass area for parking
- rentals: 20 houseboats & 6 fishing boats
- supplies; ice, propane, bait/tackle, & marine supplies
- fuel: gas & oil
- food: vending machines
- open seasonally: Thanksgiving & December 1 through May 1, 7 days a week
- expansion plans: expand anchorage



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7 (Continued)

PARADISE POINT MARINA

Commercial Marina

Location: Bishop Tract

Access:

Road -- Rio Blanco Road

Waterway -- Bishop Tract

Facilities/Services:

- 190 total berths (85 covered, 105 open)
- 100 covered dry storage spaces
- one launch ramp
- one hoist
- overnight guest dock for large & small crafts
- restrooms
- dry dock
- pumpout station
- unpaved parking for 320 vehicles
- rentals: 8 skiboats, 22 houseboats, 10 fishing boats & patio boats
- ski & fish equipment sales
- supplies: ice, propane, bait/tackle & marine supplies
- fuel: gas & oil
- food: grocery store & snack bar
- open year round, 7 days a week
- presently constructing restaurant, store, lounge, showers, restrooms, boat shop, moorage, covered moorage, and fuel docks

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7 (Continued)

VILLAGE WEST MARINA

Commercial Marina

Location: Near Stockton

Access:

Road -- Benjamin Holt Drive

Waterway -- Fourteenmile Slough

Facilities/Services:

- 630 total berths (611 covered, 19 open)
- overnight guest dock for large & small crafts
- restrooms & showers
- boat engine maintenance
- pumpout station
- paved parking for approximately 300 vehicles
- supplies: ice & propane
- fuel: gas/oil, & diesel
- food: snack bar, restaurant, cocktail lounge & beer bar
- boat sales
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7 (Continued)

STEPHENS ANCHORAGE

Commercial Marina

Location: Elmwood Tract

Access:

Road -- Brookside Road

Waterway -- Stockton Deep Water  
Channel

Facilities/Services:

- 200 total berths (173 covered, 27 open day-use)
- 142 dry storage spaces (72 covered, 70 open)
- located near Buckley Cove City Park which has 4 launching lanes
- overnight guest dock for large & small crafts
- restrooms & showers
- boat engine maintenance & light hull maintenance
- paved parking for 600 vehicles & 25 boat trailers
- picnic area: 3 tables & 3 barbecues
- supplies: ice, propane, bait/tackle & marine supplies
- fuel: gas/oil, & diesel
- food: groceries & take-out liquor
- boat sales
- open year round, 7 days a week
- expansion plans: expand dry storage capacity

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7 (Continued)

LADD'S STOCKTON MARINA

Commercial Marina

Location: Elmwood Tract near Buckley  
Cove City Park

Access:

Road -- Brookside Road

Waterway -- Stockton Deep Water  
Channel

Facilities/Services:

- 140 total berths (100 covered, 40 open)
- one marine travel lift
- boat engine & hull maintenance
- dry dock
- paved parking for 100 vehicles
- supplies: ice & marine supplies
- food: snack bar & take-out liquor
- boat sales
- open year round, closed on Sundays

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 7 (Continued)

HERMAN AND HELEN'S

Commercial Marina

Location: Empire Tract

Access:

Road -- Eightmile Road

Waterway -- Little Connection Slough

Facilities/Services:

- 177 total berths (175 covered, two open)
- one launch ramp
- gas dock used occasionally for overnight docking
- restrooms
- boat engine maintenance
- pumpout station
- unpaved parking for approximately 50 vehicles
- rentals: 10 skiboats, 20 houseboats & 10 fishing boats, 15 - 40'x12' barges for RV's at Camp-A-Float facility
- two picnic tables located on dock
- supplies: ice, propane, bait/tackle, & marine supplies
- fuel: gas/oil & diesel
- food: groceries, snack bar, & beer bar
- boat sales
- open year round, 7 days a week





EXISTING PUBLIC RECREATION FACILITIES  
AREA 7

BORROW PONDS

Five borrow ponds have been developed by Department of Water Resources for an interim period between the beginning of public use at the ponds and the beginning of construction of the Peripheral Canal. The interim period is of undefined length because of the indefinite status of the Canal.

The ponds are located between Highway 12 on the north and Eightmile Road on the south. They are 5 of 13 sections of Peripheral Canal right-of-way that were excavated as borrow areas to provide fill dirt for I-5.

In all, 7 miles of the 42-mile canal were excavated for fill dirt for the freeway, with pits arranged in preparation for the proposed canal.

The 5 ponds total an area of approximately 449 acres:

- 93 acres of pond surface
- 126 acres around margins of ponds
- 230 acres in the proposed wildlife area

The 5 ponds are long and narrow:

- widths: 270 to 350 feet
- length: 1,300 to 5,200 feet

Their average depth is 25 feet.

EXISTING PUBLIC RECREATION FACILITIES  
AREA 7 (Continued)

BORROW PONDS (Continued)

The ponds have been stocked by the Department of Fish and Game with warmwater species of fish such as black bass, catfish and sunfish.

OAK GROVE COUNTY PARK

Operation/Maintenance: San Joaquin County Parks Department, regional park

County: San Joaquin

Access:

Location -- northwest of Stockton

Access -- Eightmile Road off I-5

Facilities/Services:

- 9-acre lake
- 1,700 oak trees
- youth camp grove with 12 fire pits
- 4 - 50-person capacity picnic shelters
- picnic pavilion/750 person capacity
- interpretive center
- two nature trails: one long and one short for handicapped
- guest dock at lake
- day use only



EXISTING PUBLIC RECREATION FACILITIES  
AREA 7 (Continued)

BUCKLEY COVE PARK MARINA

Operation/Maintenance: City of Stockton  
-- regional community park

County: San Joaquin

Access:

Road -- Brookside Road off I-5

Waterway -- Stockton Deep Water  
Channel

Facilities/Services:

- 53-1/3 total acres of which 4-1/2  
acres are an open turf area
- 1,350' water frontage
- 1-1/2 miles of bank fishing:  
anadromous & warmwater fish
- special activity facility:  
water skiing, sailing, equestrian  
activity & boating with no motors,  
low speeds &/or high speeds
- 280 berths
- 4 launch lanes
- parking for 182 vehicles
- picnic area: 5 picnic tables & two  
barbecues
- 5 benches
- one drinking fountain
- one restroom
- gas & repair service
- snack bar

EXISTING PUBLIC RECREATION FACILITIES  
AREA 7 (Continued)

BUCKLEY COVE PARK MARINA (Continued)

- organized recreation programs
- playgrounds
- day use only
- open year round

FRITZ GRUPE PARK

Operation/Maintenance: City of  
Stockton

County: San Joaquin

Access:

Road -- Fourteenmile Drive

Waterway -- Fourteenmile Slough

Facilities/Services:

- 20-1/2 total acres of which 10  
acres are an open turf area
- 500' water frontage
- one mile of bank fishing
- one acre picnic area: 10 tables, 5  
barbecues & one picnic group site  
with 10 picnic tables
- paved parking for 20 vehicles
- 10 bicycle racks
- 400 spectator seats
- 8 benches
- 3 basketball courts
- 4 outdoor handball courts

EXISTING PUBLIC RECREATION FACILITIES  
AREA 7 (Continued)

FRITZ GRUPE PARK (Continued)

- one baseball diamond
- two softball diamonds
- 3 horseshoe pits
- one acre of open playfield
- two acres of other playfields
- spray pool
- 3 sun shelters
- 7 drinking fountains
- one restroom
- playgrounds
- organized recreation programs
- day use only

SOUTH SPUD ISLAND PARK

Operation/Maintenance: San Joaquin  
County Parks Department, regional  
park

County: San Joaquin

EXISTING PUBLIC RECREATION FACILITIES  
AREA 7 (Continued)

SOUTH SPUD ISLAND PARK (Continued)

Access:

Waterway access only -- Stockton  
Deep Water Channel; located between  
McDonald & Rindge Tracts; Tule Island  
northwest & Hog & Acker Islands south  
of park

The Port of Stockton owns the 67.39  
acres which comprise the park and  
leases the land to San Joaquin County  
for \$1 per year.

Facilities/Services:

- the majority of the 67.39 acres is  
undeveloped & considered a natural  
reserve
- swimming area: river
- activities: water skiing, sailing,  
boating low & high speeds
- fishing: anadromous & warmwater  
fish
- 0.2-acre picnic area: 6 tables & 3  
barbecues
- day use only
- open year round

EXISTING PUBLIC RECREATION FACILITIES  
AREA 7 (Continued)

CHANNEL I-5 BOAT RAMP PARK

Operation/Maintenance: City of Stockton  
neighborhood park

County: San Joaquin

Access:

Road -- Weber Avenue off El Dorado

Waterway -- Stockton Deep Water  
Channel

Facilities/Services:

- 4 total acres of which one acre is an  
open-turf area
- 40' dock
- two launch lanes
- 62 parking spaces
- fish for anadromous & warmwater fish
- sailing
- low-speed boating
- 3 picnic tables
- 3 benches
- one restroom
- open all year

LOUIS PARK

Operation/Maintenance: City of Stockton  
regional park

County: San Joaquin

EXISTING PUBLIC RECREATION FACILITIES  
AREA 7 (Continued)

LOUIS PARK (Continued)

Access:

Road -- Occidental Avenue off  
Shimizu Drive or Monte Diablo  
Avenue

Waterway -- Stockton Deep Water  
Channel, directly east of Rough  
and Ready Island

Facilities/Services:

- 71 total acres of which 10 are an  
open-turf area and 3 are  
undeveloped
- 5,800' water frontage
- one mile of bank fishing:  
anadromous & warmwater fish
- 140' dock
- two launch lanes
- boating low & high speeds
- 618 parking spaces
- 10 bicycle racks
- 4-acre picnic area: 31 tables, 16  
barbecues & 3 picnic group sites
- one acre of open field
- 8 acres for playfields
- 12 benches
- 800 spectator seats
- 3 basketball courts

EXISTING PUBLIC RECREATION FACILITIES  
AREA 7 (Continued)

LOUIS PARK (Continued)

Facilities/Services: (Continued)

- 4 tennis courts
- 4 outdoor handball courts
- one baseball diamond
- 5 softball diamonds
- 19 horseshoe pits
- spray pool
- 8 drinking fountains
- 5 restrooms
- gas & repair service
- snack bar
- alcoholic beverage sales
- bait & tackle sales
- organized recreation programs
- playgrounds
- day use only
- open all year

POTENTIAL PUBLIC RECREATION SITES

AREA 7

Bouldin Island Recreation Area

Access:

Highway 12 to Levee Road

- fishing
- picnicking
- swimming
- camping
- boat launching
- guest docking
- parking area
- restrooms/showers
- potable water
- pumpout station
- trash receptacles

Proposed by: Army Corps of Engineers,  
Stockton Ship Channel (Dredge Material  
Disposal Site)

Empire Tract Recreation Area

Access:

Eightmile Road to Levee Road

- fishing
- picnicking
- swimming
- camping
- boat launching
- guest docking
- parking area
- restrooms/showers
- potable water
- pumpout station
- trash receptacles

Proposed by: Army Corps of Engineers,  
Stockton Ship Channel (Dredge Material  
Disposal Site)

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 7 (Continued)

Headreach Island Boater Destination  
Site

Access:

Water Access Only - San Joaquin  
River

- preserve natural environment, with  
no significant alterations
- picnicking
- swimming
- trails
- chemical toilets
- trash receptacles

Channel Islands River Project

Access: Water Access Only - Potato  
Slough, Little Potato Slough, White  
Slough and Disappointment Slough

- preserve natural environment, with no  
significant alterations
- boater destination sites
- nature trails

Previously Proposed by: California  
Department of Parks and Recreation

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 7 (Continued)

Bishop Tract Fishing Access

Access:

Eightmile Road to Levee Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Venice Cut Wildlife Area

Access:

Water Access Only - San Joaquin  
River

- preserve natural environment and  
wildlife habitat

Proposed by: Army Corps of Engineers,  
Stockton Ship Channel (Dredge Material  
Disposal Site)





AREA 8





Table 42

## RECREATION USE:

## AREA 8 AND BORDERING WATERWAYS

AREA 8	TOTAL RECREATIONISTS
	N
Connection Slough	344
Bacon Island	217
Mandeville Island and/or Tip	207
City of Stockton	204
Middle River from Deep Water Channel to Highway 4	201
Empire Cut and Turner Cut	175
Whiskey Slough	171
Lower Roberts Island	169
Columbia Cut	123
Trapper Slough	89
Lower Jones Tract	84
McDonald Tract	76
Woodward Canal and North Victoria Canal	67
Upper Jones Tract	63
Victoria Island - North	52
Woodward Island	21
Medford Island	16
Mildred Island	13
Latham Slough	5

Table 42 (Continued)

## RECREATION USE:

## AREA 8 AND BORDERING WATERWAYS

AREA 8	TOTAL RECREATIONISTS
	N

## BORDERING WATERWAYS

San Joaquin River and Stockton Deep Water Channel from the Mokelumne River to Highway 4, including Burns Cutoff	962
Old River from San Joaquin River south to Highway 4	183



Table 43

## Recreation Activity - Area 8

Activity	Number of Recreation Activities	%
Bicycling	17	1.2
Photography	46	2.9
Water Skiing	76	5.5
Driving for Pleasure	102	7.4
Canoe-Kayak-Rowing	18	1.3
Picnicking	101	7.3
Sailing	23	1.7
Dirt Biking	10	0.7
Relaxing	147	10.7
Swimming	111	8.1
Sightseeing	104	7.6
Flying	4	0.3
Snorkeling/Scuba	5	0.4
Fishing	245	17.8
Hunting	22	1.6
Camping	136	9.9
Motorboating	216	15.7
TOTAL	1,377	100.0



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8 (Continued)

WINDMILL COVE MARINA

Commercial Marina

Location: Lower Roberts Island

Access:

Road -- Windmill Cove Road

Waterway -- Stockton Deep Water  
Channel

Facilities/Services:

- 28 covered berths
- one launch ramp
- overnight guest dock for large & small crafts
- restrooms & showers
- unpaved parking for 60 vehicles
- 40 car & RV campsites
- picnic area: 20 picnic tables
- supplies: ice & bait
- fuel: gas & oil
- food: snack bar, cocktail lounge, & beer bar
- open year round, 7 days a week
- expansion plans: construct showers & restrooms at campgrounds

WHISKEY SLOUGH HARBOR

Commercial Marina

Location: Roberts Island near the  
town of Holt

WHISKEY SLOUGH HARBOR (Continued)

Access:

Road -- Whiskey Slough Road

Waterway -- Whiskey Slough

Facilities/Services:

- 78 total berths (52 covered & 26 open)
- one launch ramp/two lanes
- overnight guest dock for large & small crafts
- two acres unpaved parking for approximately 100 vehicles & boat trailers
- rentals: fishing boats
- 36 car & RV campsites (5 sites with electricity)
- 12 group campsites
- 4 picnic tables outside snack bar
- supplies: ice & live bait/tackle
- fuel: gas & oil
- food: snack bar & beer bar
- open year round, 7 days a week
- expansion plans: build houseboat berths, build showers, improve bathrooms, & add 10 more electrical hookups at camping area

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8 (Continued)

UNION POINT FISHING RESORT

Commercial Marina

Location: Roberts Island

Access:

Road -- Highway 4

Waterway -- Middle River

Facilities/Services:

Presently closed due to quake damage

B & G BOATS

Commercial Marina

Location: Upper Jones Tract

Access:

Road -- Bacon Island Road

Waterway -- Middle River

Facilities/Services:

- gas dock
- rentals: two fishing boats
- supplies: clam bait
- fuel: gas & oil
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8 (Continued)

MIDDLE RIVER INN

Commercial Marina

Location: Upper Jones Tract

Access:

Road -- Bacon Island Road

Waterway -- Middle River

Facilities/Services:

- guest dock for large & small crafts
- restrooms
- unpaved parking for approximately 20 vehicles
- supplies: ice
- food: restaurant, beer/wine bar, & take-out liquor
- open year round, 7 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8 (Continued)

POP'S MARINA

Commercial Marina

Location: Upper Jones Tract

Access:

Road -- Bacon Island Road

Waterway -- Middle River

Facilities/Services:

- 18 total berths (14 covered, 4 open)
- rentals: 12 - 12' fishing boats
- supplies: bait & tackle
- fuel: gas & oil
- open year round, 7 days a week

TIKI LAGUN RESORT MARINA

Commercial Marina

Location: Lower Roberts Island

Access:

Road -- Neugebuer Road

Waterway -- Turner Cut

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8 (Continued)

TIKI LAGUN RESORT MARINA (Continued)

Facilities/Services:

- 142 total covered berths
- one launch ramp
- overnight guest dock for large & small crafts
- restrooms & showers
- unpaved parking for approximately 175 vehicles
- 54 car & RV campsites: electricity, water, sewer hookups, showers & restrooms
- open picnic area: 50 picnic tables
- supplies: ice, propane & bait/tackle
- fuel: gas & oil
- food: groceries, restaurant & beer/wine bar
- open year round, 7 days a week
- expansion plans: 68 additional berths, pumpout station & 600' open dock



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8 (Continued)

TURNER CUT RESORT

Commercial Marina

Location: Lower Roberts Island

Access:

Road -- Neugebauer Road

Waterway -- Turner Cut

Facilities/Services:

- 106 total berths (99 covered, 7 open)
- approximately 20 open dry storage spaces
- overnight guest dock for large & small crafts
- restrooms & showers
- paved parking for 106 vehicles & boat trailers
- 30 car & RV campsites: electricity, water, 5 septic tanks, showers & restrooms
- laundromat
- supplies: ice, propane, & bait/tackle

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8 (Continued)

TURNER CUT RESORT (Continued)

Facilities/Services: (Continued)

- fuel: gas & oil
- food: limited groceries, restaurant, beer bar & take-out beer
- open year round, 7 days a week
- expansion plans: acquired permit to expand docks to include 12 more berths

TAYLOR'S MARINA

Commercial Marina

Location: McDonald Tract

Access:

Road -- McDonald Road

Waterway -- Stockton Deep Water Channel

Facilities/Services:

- 3 covered berths
- supplies: ice, propane and bait/tackle
- fuel: gas/oil, and diesel
- food: snacks and beer/wine bar
- proposed schedule: open 9 months a year and 6 days a week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 8 (Continued)

LOST ISLE

Commercial Marina

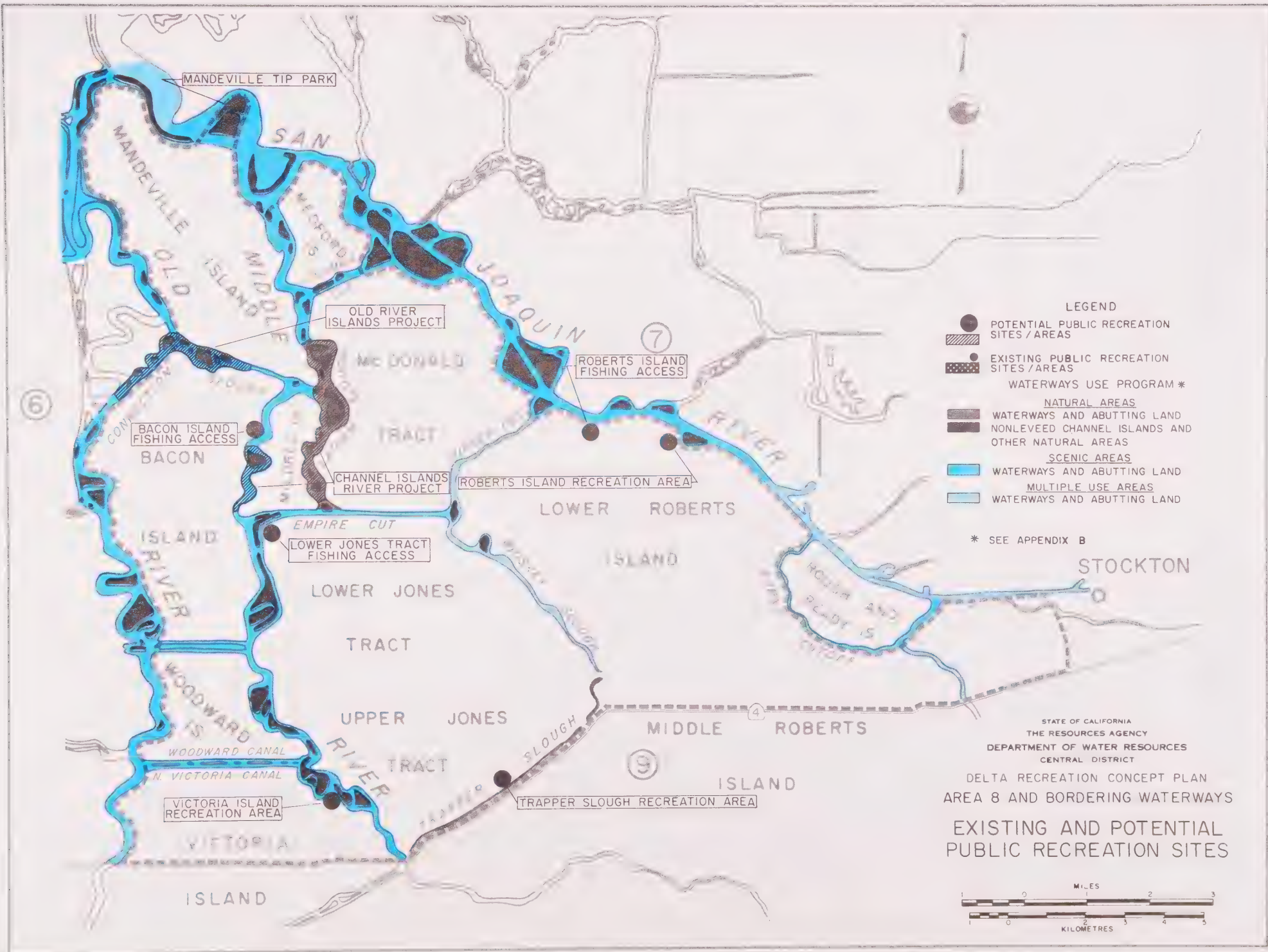
Location: Acker Island

Access:

Waterway -- Off Stockton Deep Water  
Channel (water access  
only)

Facilities/Services:

- day-use guest docks for large & small  
crafts
- tent camp sites
- restrooms
- one 50' long picnic table
- food: restaurant, cocktail lounge
- open year round, 7 days a week



EXISTING PUBLIC RECREATION FACILITIES  
AREA 8

MANDEVILLE TIP PARK

Operation/Maintenance: Port of  
Stockton, regional park

County: San Joaquin

Access:

Water access only -- Stockton Deep  
Water Channel; located between  
Venice Island (north) & Mandeville  
Island (south)

Mandeville Tip Park is owned by the Port of Stockton. Previously, the 176.03 acres which make up the northernmost tip of the large land mass called Mandeville Island was leased to San Joaquin County for \$1 per year. The County constructed boat docks, portable restroom facilities, picnic tables and barbecue pits. The operation and maintenance of the park became too expensive after one year when the County started feeling the effects of Proposition 13. San Joaquin County discontinued leasing the property and Port of Stockton began operating and maintaining the park July 1979.

Facilities/Services:

- 176.03 acres of natural area of which  
10 acres are under water
- 10,800' water frontage
- 220' guest dock
- 1/2 acre picnic area: 12 tables & 10  
barbecues
- two chemical restrooms
- one mile hiking trail
- fishing: anadromous & warmwater  
fish

EXISTING PUBLIC RECREATION FACILITIES  
AREA 8 (Continued)

MANDEVILLE TIP PARK (Continued)

Facilities/Services: (Continued)

- activities: water skiing, sailing,  
& boating low & high speeds
- day use only
- open year round

PROPOSED PUBLIC RECREATION FACILITIES  
AREA 8

ROBERTS ISLAND

Dredging the San Joaquin River from New York Slough to the Port of Stockton (Stockton Deep Water Channel) beginning October 1980, will produce dredged material disposal (DMD) sites at which various recreation facilities have been proposed.

One such 80-acre dredged material disposal site will be located on the northern portion of Roberts Island. The Port of Stockton owns this property which is bordered on the west by Black Slough and on the east by Vulcan Island. The Port of Stockton has agreed to act as project sponsor and cooperatively develop a Roberts Island recreation area. The recreation area will be accessible by auto and boat and will be developed with day-use and overnight facilities.

The dredging of the Stockton Deep Water Channel is expected to be completed in 1986. Completion of Roberts Island recreation area is targeted for 1989.



POTENTIAL PUBLIC RECREATION SITES

AREA 8

Old River Islands Project

Access:

Water Access Only - Old River and  
Connection Slough

- preserve natural environment
- nature trails
- guest dock on Rhode Island

Proposed by: Army Corps of Engineers,  
Sacramento-San Joaquin Delta  
Investigation

Channel Islands River Project

Access:

Water Access Only - Middle River and  
Latham Slough

- preserve natural environment, with no  
significant alterations
- boater destination sites
- nature trails

Previously Proposed by: California  
Department of Parks and Recreation

Victoria Island Recreation Area

Access:

Highway 4 to Victoria Island Levee  
Road

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 8 (Continued)

Victoria Island Recreation Area  
(Continued)

Facilities/Services:

- fishing
- picnicking
- camping
- guest docking
- parking area
- restrooms/showers
- potable water
- pumpout station
- trash receptacles

Bacon Island Fishing Access

Access: Bacon Island Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Lower Jones Tract Fishing Access

Access:

Lower Jones Road or Bacon Island  
Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles



POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 8 (Continued)

Roberts Island Recreation Area

Access:

Holt Road

- fishing
- picnicking
- camping
- boat launching
- guest docking
- parking area
- restrooms/showers
- potable water
- pumpout station
- trash receptacles

Proposed by: Army Corps of Engineers,  
Stockton Ship Channel (Dredge Material  
Disposal Site)

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

Roberts Island Fishing Access

Access:

Holt Road or Neugebauer Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Trapper Slough Fishing Access

Access:

Bacon Island Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Proposed by: Army Corps of Engineers,  
Sacramento-San Joaquin Delta  
Investigation



AREA 9



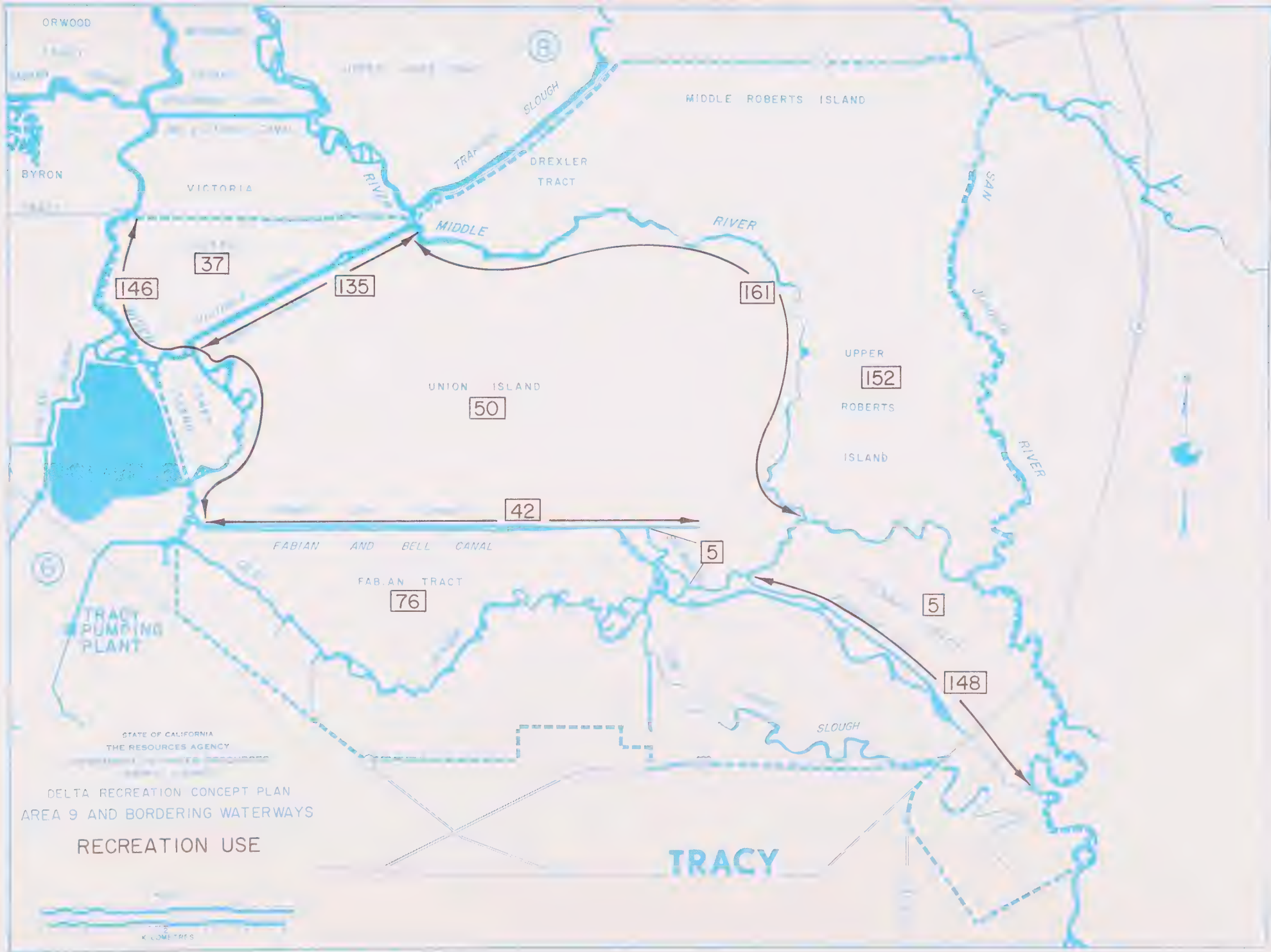


FIGURE 46

Table 44

## RECREATION USE:

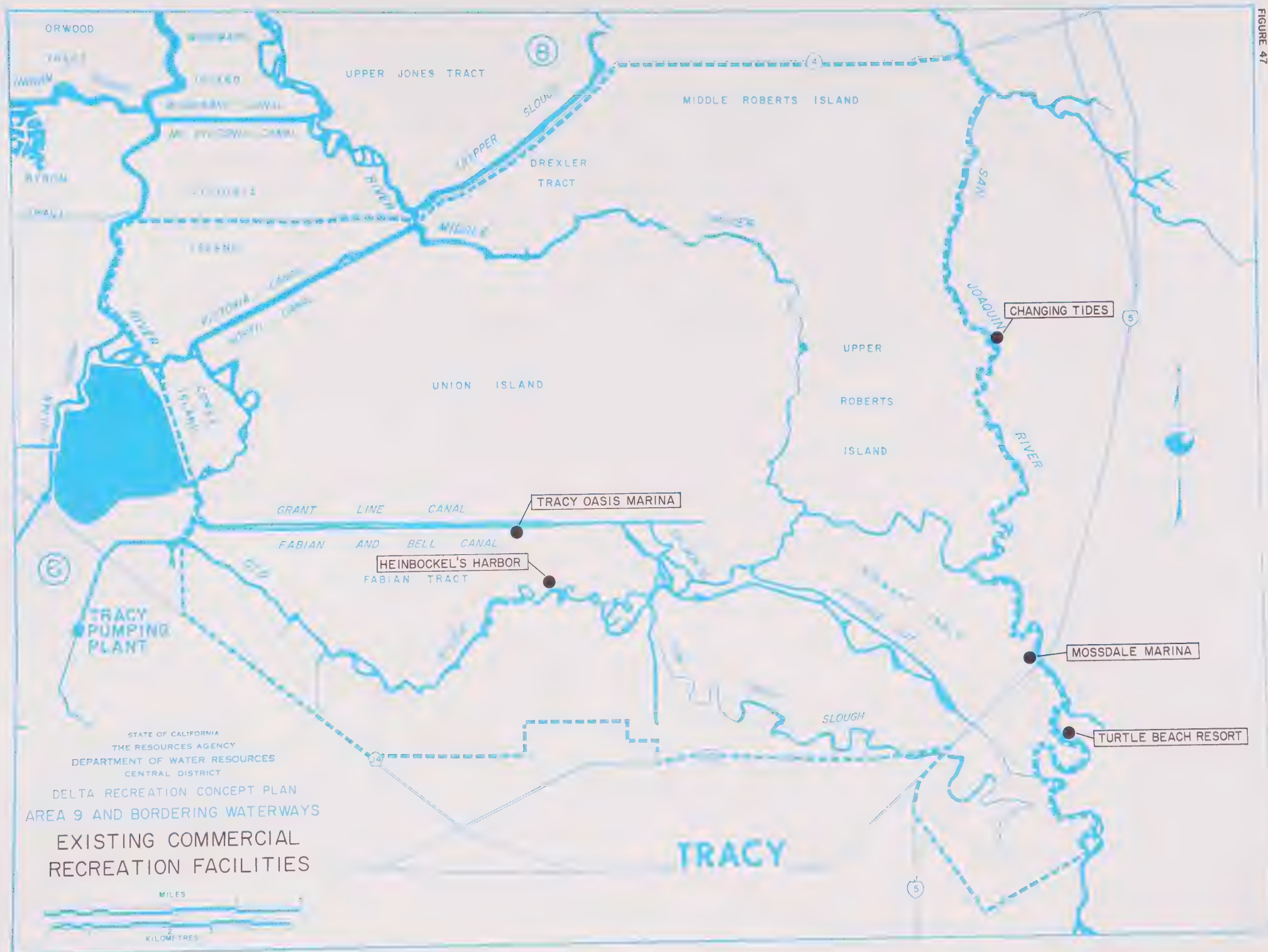
## AREA 9 AND BORDERING WATERWAYS

AREA 9	TOTAL RECREATIONISTS
	N
Middle River from Highway 4 south to Old River	161
Upper Roberts Island	152
Paradise Cut	148
Victoria Canal and North Canal	135
Fabian Tract	76
Union Island	50
Grant Line Canal and Fabian and Bell Canal	42
Victoria Island - south	37
Salmon Slough	5
Stewart Tract	5
BORDERING WATERWAYS	
Old River from Highway 4 south to Grantline Canal	146



Table 45  
Recreation Activity - Area 9

Activity	Number of Recreation Activities	%
Bicycling	7	1.5
Photography	15	3.2
Water Skiing	38	8.2
Driving for Pleasure	42	9.1
Canoe-Kayak-Rowing	5	1.1
Picnicking	38	8.2
Sailing	1	0.2
Dirt Biking	3	0.6
Relaxing	51	11.0
Swimming	39	8.4
Sightseeing	37	8.0
Flying	1	0.2
Snorkeling/Scuba	2	0.4
Fishing	84	18.1
Hunting	7	1.5
Camping	20	4.3
Motorboating	74	15.9
TOTAL	464	100.0



EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 9

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 9 (Continued)

CHANGING TIDES

Commercial Marina

Location: Near Lathrop

Access:

Road -- Bowman Road off I-5

Waterway -- San Joaquin River

Facilities/Services:

- 100' overnight guest dock for small crafts
- restrooms
- 10 car & RV campsites: 3 sites with electricity & 10 with water
- supplies: ice & bait/tackle
- food: restaurant & beer bar

MOSSDALE MARINA

Commercial Marina

Location: San Joaquin County, South of Lathrop

MOSSDALE MARINA (Continued)

Access:

Road -- Manthey Road

Waterway -- San Joaquin River

Facilities/Services:

- 14 open berths
- overnight guest dock for large & small crafts
- restrooms & showers
- paved parking for 12 vehicles & two acres unpaved parking
- rentals: fishing equipment
- camping for cars & RV's on two acre open area
- supplies: ice, bait/tackle & marine supplies
- fuel: oil
- food: groceries, snack bar, & beer bar
- open year round, 7 days a week; except closed on Mondays during winter

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 9 (Continued)

TURTLE BEACH RESORT

Commercial Marina

Location: San Joaquin County, south  
of Lathrop

Access:

Road -- Williamson Road from  
Woodward Road

Waterway -- Walthall Slough and  
San Joaquin River

Facilities/Services:

- 23 covered berths
- 20 open dry storage spaces
- one launch ramp/two lanes
- laundromat
- unpaved parking for 100 vehicles  
& boat trailers
- 40 RV campsites: electricity,  
water, showers, & restrooms
- 150 tent/car campsites: water,  
showers, & restrooms
- one large group picnic site: 5  
picnic tables

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 9 (Continued)

TURTLE BEACH RESORT (Continued)

Facilities/Services: (Continued)

- supplies: ice, propane, & bait
- fuel: gas & oil
- food: groceries, snack bar, beer
- open year round, 7 days a week

HEINBOCKEL'S HARBOR

Commercial Marina

Location: Fabian Tract

Access:

Road -- Tracy Boulevard

Waterway -- Old River

Facilities/Services:

- guest dock rented by the month for  
large & small crafts
- restrooms
- paved parking for 20 vehicles
- fuel: gas & oil
- closed two to three months during  
winter, depending on length of  
rainy season, & Mondays/Tuesdays of  
each week

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 9 (Continued)

TRACY OASIS MARINA

Commercial Marina

Location: Fabian Tract

Access:

Road -- Grimes Road

Waterway -- Fabian Bell Canal

Facilities/Services:

- 139 berths (104 covered, 35 open)
- one launch ramp/two lanes
- one hoist elevator
- guest dock for large & small craft
- restrooms & showers
- pumpout station by special arrangement only
- laundromat

EXISTING COMMERCIAL RECREATION  
FACILITIES - AREA 9 (Continued)

TRACY OASIS MARINA (Continued)

Facilities/Services: (Continued)

- unpaved parking for 150 vehicles & boat trailers
- rentals: ski equipment
- 35 car & RV campsites: showers, restrooms, picnic tables & barbecues (3 campsites have water hookups)
- supplies: ice, propane, bait/tackle, & marine supplies
- fuel: gas/oil & diesel on request only
- food: groceries, restaurant & beer/wine bar
- boat sales
- open year round, 7 days a week
- expansion plans: cover dry storage, & add full campsite hookups - sewage, water, & electricity



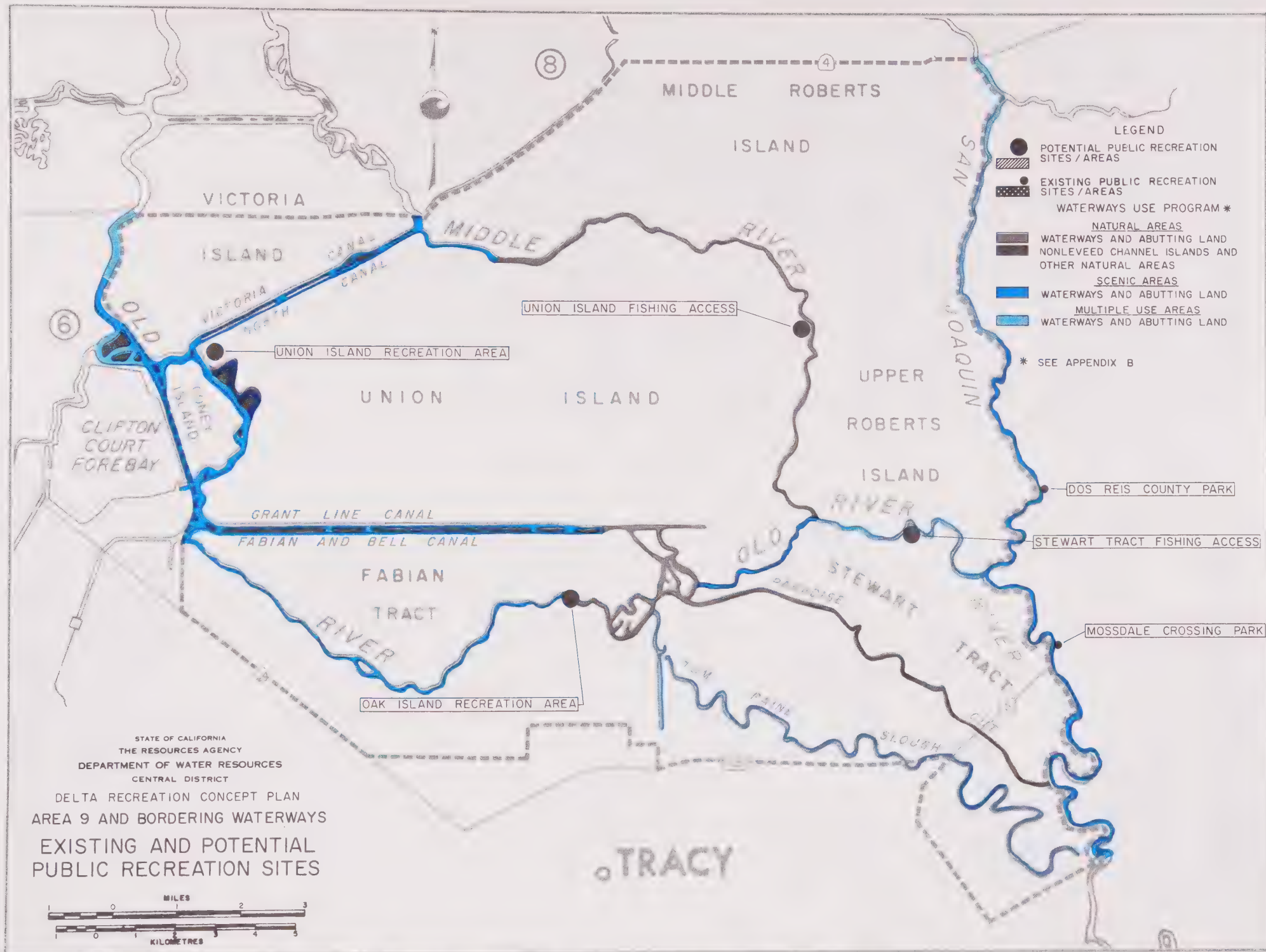


FIGURE 48

EXISTING PUBLIC RECREATION FACILITIES  
AREA 9

DOS REIS COUNTY PARK

Operation/Maintenance: San Joaquin  
County Park Department, regional  
park

Location: Near Lathrop

Access:

Road -- Dos Reis Road off I-5

Waterway -- San Joaquin River

Facilities/Services:

- 9 acres
- 450' water frontage
- swimming area: river
- .09 miles bank fishing: anadromous &  
warmwater fish
- one launch ramp/one lane
- activities: water skiing & boating  
low & high speeds
- 0.2-acre picnic area: 4 tables & 2  
barbecues
- 4 chemical restrooms

EXISTING PUBLIC RECREATION FACILITIES  
AREA 9 (Continued)

DOS REIS COUNTY PARK (Continued)

Facilities/Services: (Continued)

- parking for 46 vehicles
- day use only
- open year round

MOSSDALE CROSSING PARK

Operation/Maintenance: San Joaquin  
County Parks Department

County: San Joaquin

Access:

Location -- south of Lathrop

Road -- Manthey Road off Louise  
Avenue

Waterway -- San Joaquin River

Facilities/Services:

- launch ramp
- paved parking
- restrooms

POTENTIAL PUBLIC RECREATION SITES

AREA 9

Oak Island Recreation Area

Access:

Finck Road

- fishing
- picnicking
- camping
- guest docking
- parking area
- restrooms/showers
- potable water
- trash receptacles

Proposed by: Army Corps of Engineers,  
Sacramento-San Joaquin Delta  
Investigation

Union Island Recreation Area

Access:

Clifton Court Road to Levee Road

- fishing
- picnicking
- camping
- boat launching
- guest docking

POTENTIAL PUBLIC RECREATION SITES  
(Continued)

AREA 9 (Continued)

Union Island Recreation Area  
(Continued)

- parking area
- restrooms/showers
- potable water
- pumpout station
- trash receptacles

Union Island Fishing Access

Access:

Wing Levee Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles

Stewart Tract Fishing Access

Access:

Paradise Road and San Joaquin Road

- fishing
- picnicking
- parking area
- chemical toilets
- trash receptacles



## PROPOSED PERIPHERAL CANAL RECREATION





CONCEPTS FOR RECREATION, FISH AND  
WILDLIFE DEVELOPMENTS ALONG THE  
PROPOSED PERIPHERAL CANAL

The proposed Peripheral Canal would be located along the eastern perimeter of the Delta. It would start at Hood on the Sacramento River and end at Clifton Court Forebay in the southern Delta (Figure 49).

If the Canal is built, certain trails, auto-aquatic parks, fishing access sites, major recreation areas, and wildlife areas will serve as alternative and/or additional developments to those presented in this concept plan (Plate 1). Each type of recreation development would be modified for specific land uses and would be designed to accommodate the physically handicapped.

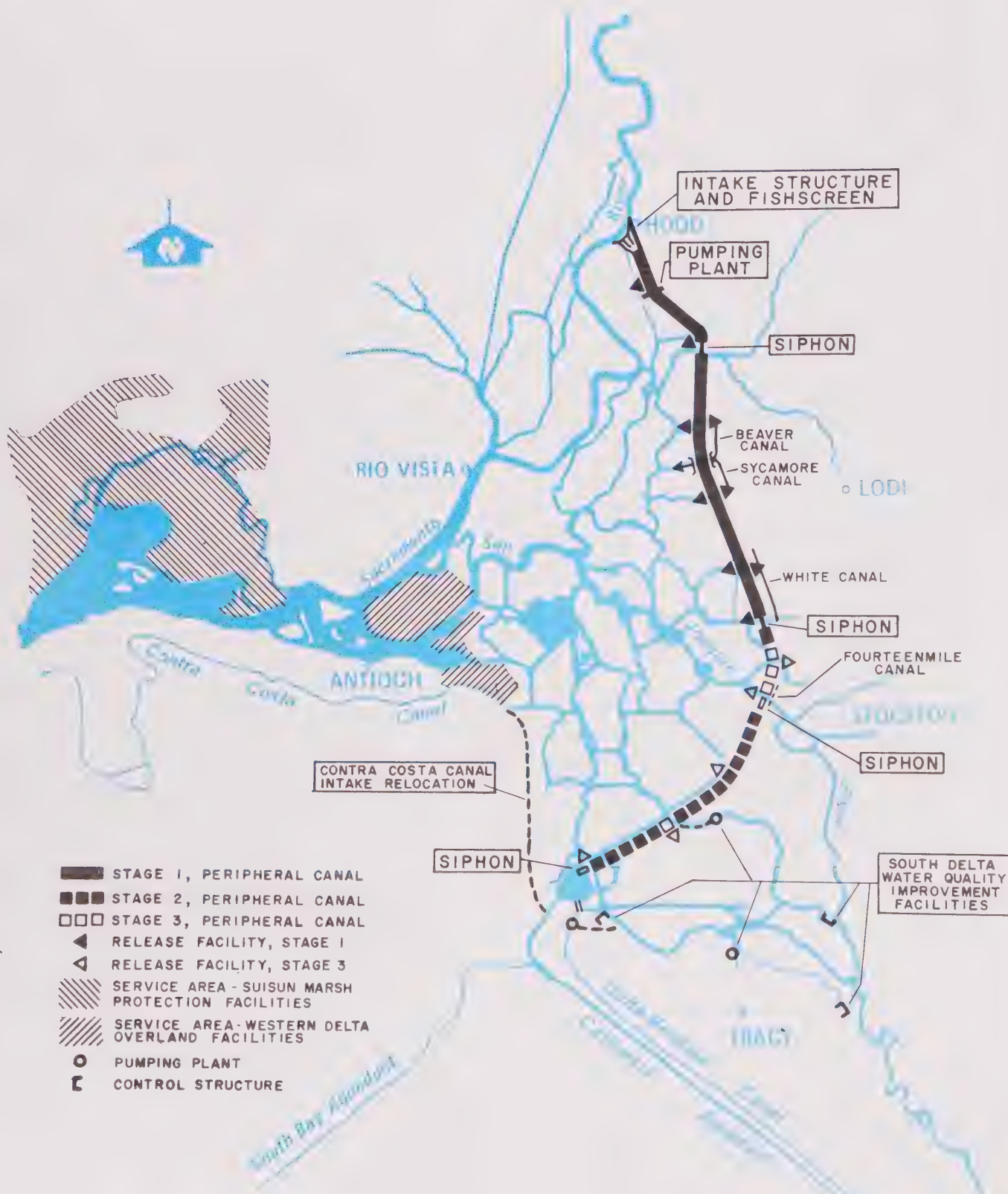
Proposed recreation and wildlife developments and locations along the Canal include:

- bicycling, hiking, and equestrian trail system (Figure 50)
- 6 auto-aquatic parks located at Twin Cities Road, Walnut Grove Road, Guard Road, Eightmile Road, Inland Drive, and Trapper Slough-Middle River area. Auto-aquatic parks would offer launching ramps, sanitary facilities, potable water, picnicking areas and beaches, and parking.

CONCEPTS FOR RECREATION, FISH AND  
WILDLIFE DEVELOPMENTS ALONG THE  
PROPOSED PERIPHERAL CANAL (Continued)

- 10 fishing access sites located at Snodgrass Slough, Mokelumne River, Hood, Beaver Slough, Hog Slough, Sycamore Slough, White Slough, Woodbridge Road, White Canal and San Joaquin River.
- 8 major recreation areas located at the proposed sediment basin at Hood, Walnut Grove, Highway 12, Fourteenmile Slough (includes lagoon and nature study area), Trapper Slough, Upper Middle River, and Old River. Major recreation areas would offer swimming, picnicking, overnight camping, potable water, dressing rooms with showers, sanitary facilities, parking, and concessions.
- 4 wildlife areas located at Lost Slough, Hog Slough, White Slough, and Jacob's Road. Riparian vegetation would expand naturally. Activities would be restricted to birdwatching, fishing, nature photography and study, restricted hunting, hiking, and esthetic enjoyment.

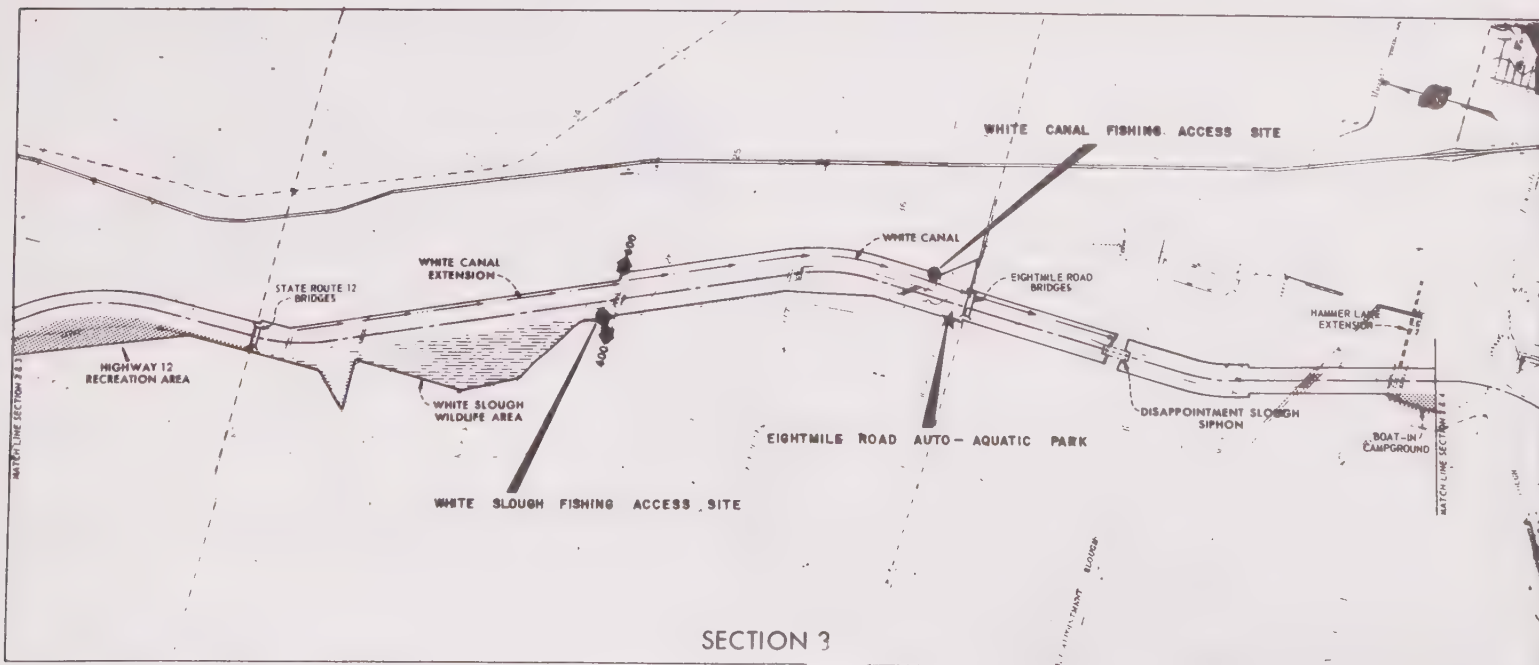
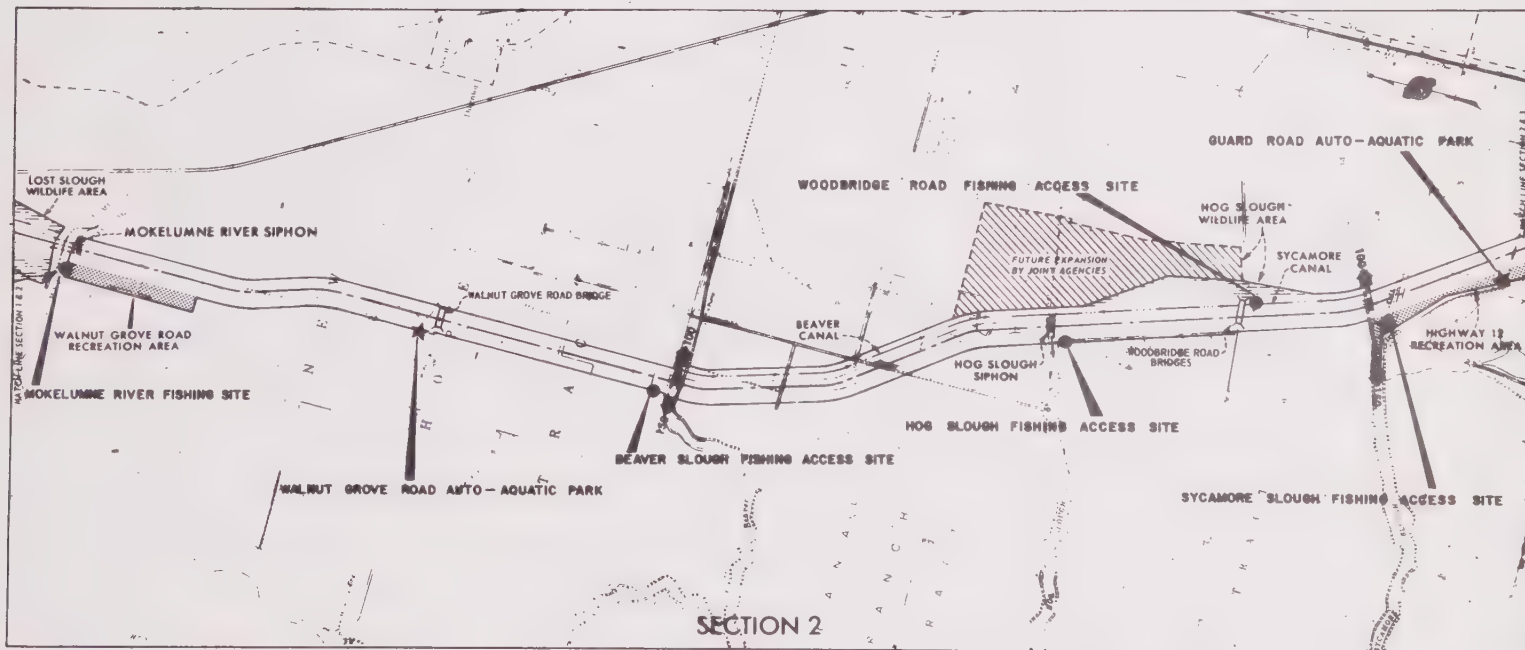
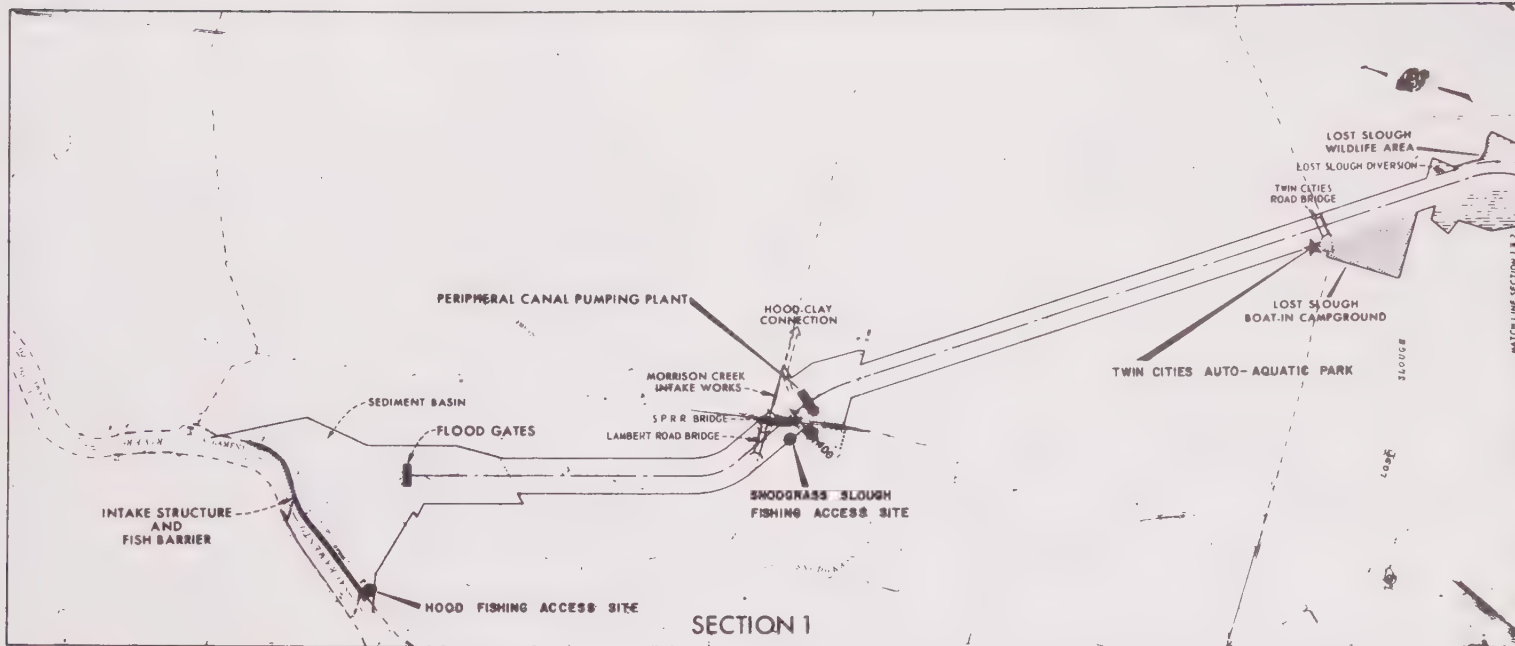
For a more detailed description of proposed recreation developments along the Peripheral Canal, see the Department of Water Resources' Concept Plan Recreation, Fish and Wildlife Developments Along the Proposed Peripheral Canal, March 1980.

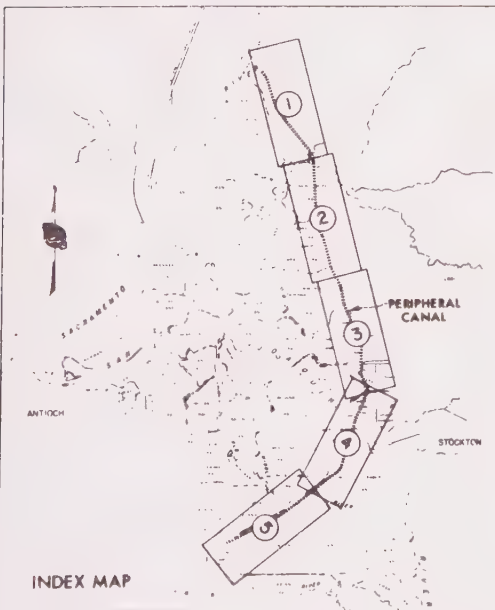
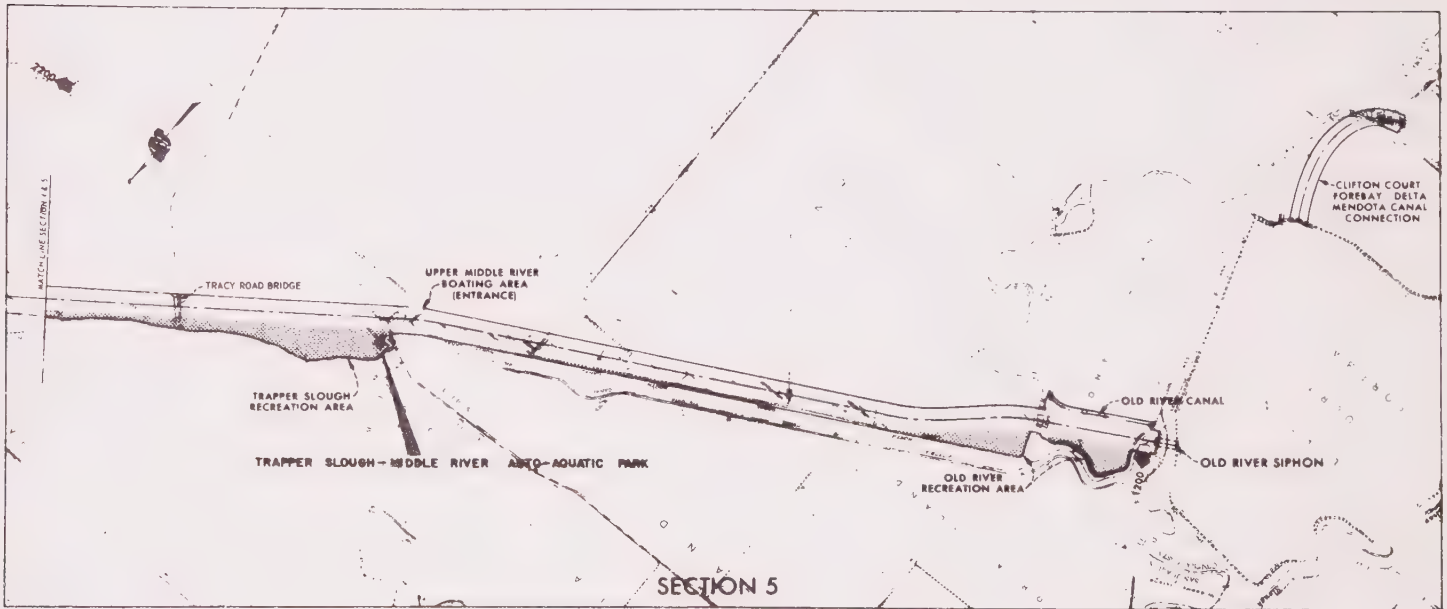
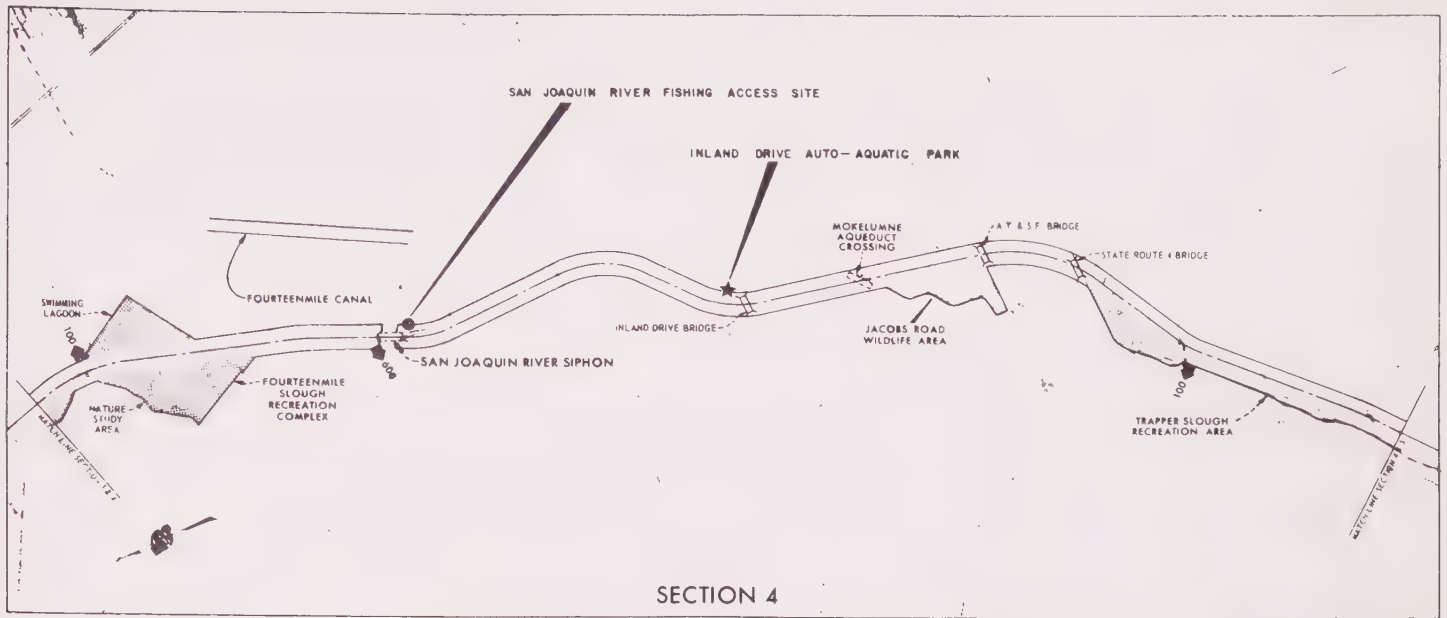


# PROPOSED PERIPHERAL CANAL PROJECT









- LEGEND
- MAJOR RECREATION AREA
  - MAJOR WILDLIFE AREA
  - AUTO-AQUATIC PARK
  - FISHING ACCESS SITE
  - RELEASE FACILITY (CFS)
  - WATER SURFACE AREA

Plate 1

PROPOSED PERIPHERAL CANAL  
RECREATION FACILITIES









## RECOMMENDATIONS



## RECOMMENDATIONS

The Delta Outdoor Recreation Survey and Delta Recreation Concept Plan are only parts of the total recreation planning process. The following actions are recommended to further the process:

1. The Department of Water Resources and Army Corps of Engineers should adjust the recreation concept plan to the proposed levee rehabilitation plan.
2. A preliminary recreation implementation plan including a benefit/cost analysis and alternative cost-sharing program should be undertaken.
3. The recreation concept plan should be reviewed by concerned agencies prior to public meetings.
4. Once a recreation plan is agreed upon, each potential recreation site (including trails), will require individual site analysis to refine the design concept and produce a final master plan.
5. A master plan should be undertaken for each proposed interpretive site. This would include an interpretive prospectus (a concise narrative statement of the interpretive objectives describing function, relationship to sites, provisions for operation and maintenance), schematic drawings, and construction plans.







## APPENDICES



## APPENDIX A

### DESCRIPTION OF GENERAL AREAS' BOUNDARIES



## DESCRIPTION OF GENERAL AREAS' BOUNDARIES

### Area No. 1\*

From Freeport's west bank of Sacramento River, west to west side of Sacramento Deep Water Channel; south along west bank to adjacent Road 155; west on Road 155 to the Yolo-Solano County line; follow County line south, then east to east bank of Sacramento River; north along the land side of Yolo County to Freeport's west bank of Sacramento River.

\* Include Town of Freeport in Area No. 1.

### Area No. 2

From intersection of Road 155 and Yolo-Solano County lines; west to Highway 113 (Rio Dixon Road); south on Highway 113 and continuing to Creed Road; proceed east or southerly to Highway 12 following Creed Road to Robinson Road; Flannery Road, Camwright Road, and Liberty Island Road; then east on Highway 12 to the Sacramento River. Go northeast following the riverbank to intersection with the Yolo-Solano County line.

### Area No. 3

Starting from the Town of Hood, follow the land south to Highway 12. Take Highway 12 east to the land bordering the west bank of the North Fork Mokelumne River; follow the landside north and then east to Franklin Boulevard, then north on Franklin Boulevard to Lambert Road. Go west on Lambert Road to the S.P.T. Co. railroad tracks, then north along railroad tracts to the Town of Hood.

### Area No. 4

Starting from the intersection of Franklin Boulevard and the Sacramento-San Joaquin County line, follow the landside of San Joaquin County in a southerly direction to Highway 12. Follow Highway 12 east to the intersection of Thornton Road, then Thornton Road north to the Town of Thornton. From the Town of Thornton, take Franklin Boulevard north to the San Joaquin-Sacramento County line.

### Area No. 5\*

From an eastern point on Andrus Island where Highway 12 intersects, proceed south along the riverbank to the northwest tip of Sherman Island. Go east along south bank of Sacramento River to Highway 12. Take Highway 12 west back to the beginning point.

\* Include Town of Collinsville in Area No. 5.



## DESCRIPTION OF GENERAL AREAS' BOUNDARIES (Continued)

### Area No. 6\*

Starting from the northeast tip of Webb Tract (near the Contra Costa, Sacramento and San Joaquin County lines), follow the south bank of San Joaquin River westward to a point due north of the western tip of Browns Island; then south to the south bank of the San Joaquin River. Proceed east along the riverbank to Highway 160; south to Highway 4; east and south along Highway 4 to the Byron Highway; then southeast along Byron Highway to the Alameda County line. Proceed north to Highway 4 and continue along west bank of Old River to starting point.

\* Include Town of Pittsburg and Town of Antioch in Area No. 6.

### Area No. 7

Starting from the intersection of Highway 12 and Interstate 5, proceed west on Highway 12 to the northwest section of Bouldin Island. Proceed south along the east bank of Mokelumne River; then south on western edge of Venice Island. Follow the north bank of the Stockton Deep Water Channel southeast to Interstate 5; then north on Interstate 5 to intersection of Highway 12.

### Area No. 8\*

Starting from the northwest tip of Mandeville Island, proceed south along the eastern bank of Old River to Highway 4; east on Highway 4 to Interstate 5, north to south bank of the Stockton Deep Water Channel; west along Burns Cutoff. Follow the riverbank northwest to the starting point.

\* Include the City of Stockton.

### Area No. 9

Starting from Highway 4 and the San Joaquin River, proceed west on Highway 4 to Old River; proceed due south to J4. Follow the highway southeast to Bethany Road, east to Lammers Road, south on Tracy Boulevard to Interstate 205, east to Interstate 5, south to Kasson Road and then southeast on Kasson Road to Wright Road. Proceed northeast on Wright Road continuing to the west bank of the San Joaquin River. Follow the west bank north back to Highway 4.

## APPENDIX B

### SACRAMENTO-SAN JOAQUIN DELTA WATERWAYS USE PROGRAM



## LEGEND TO WATERWAYS USE PROGRAM

### NATURAL AREAS

#### WATERWAYS AND ABUTTING LAND

Those waterways, or portions of waterways and abutting lands, including levees, exhibiting scenic, ecological, or natural values of statewide significance. 1/ These areas should be preserved to perpetuate the public trust; to protect wildlife habitat, existing vegetation, and remnants of the waterways history; to retain areas having solitude and wildernesslike features; and may be used for nonintensive recreation.

#### NONLEVEED CHANNEL ISLANDS AND OTHER NATURAL AREAS

Included within this classification are all undeveloped 2/ nonleveed channel islands throughout the Delta. This does not necessarily imply public ownership but only serves to identify all nonleveed islands as areas of significant natural resources and/or historic value.

### SCENIC AREAS

#### WATERWAYS AND ABUTTING LAND

Those waterways or portions of waterways and abutting lands including levees which are of a lesser ecological or natural value than "Natural Areas" or have the potential for enhancement and which can support a wider range of active recreational activities without adverse environmental impact. These areas shall be managed and used to protect and further the public trust, protect wildlife habitat and existing vegetation, permit compatible public recreation uses, retain remnants of the waterways history, restrict inappropriate development in the waterway, and maintain through-navigation.

1/ Statewide significance means the area has such a high environmental value that it could be a candidate for acquisition as a State or Federal park, preserve, reserve or wildlife management area.

2/ Undeveloped includes those nonleveed islands with unauthorized uses and excludes those portions with authorized uses.

## LEGEND TO WATERWAYS USE PROGRAM (Continued)

### MULTIPLE USE AREAS

#### WATERWAYS AND ABUTTING LAND

Those waterways, or portions of waterways, which have little or no natural values and moderate to minor scenic values. They may have substantial waterside development and/or generally have sufficient water surface to accommodate a variety of intensive uses. These areas shall be managed and used to protect and further the public trust, restrict inappropriate development in the waterway, and maintain through-navigation.



## WATERWAYS USE PROGRAM

### I. GENERAL

#### A. Purpose of the Program

This program is established to guide uses and development in, on, over and abutting 1/ all Delta waterways, unless specific portions of the Delta are more stringently regulated by appropriate governmental agencies. The program is specifically intended to: protect, preserve, and restore the Delta's natural and ecological values; halt development of, and cause removal of, unauthorized 2/ projects 3/ in, on, over and abutting Delta waterways, or cause permit processes to be initiated; establish uniform standards for all levels of government to use in evaluating project proposals; reduce conflicts between uses and to encourage a wider distribution of recreational activities throughout the Delta; protect the public interest and the public trust (see Section I.C.) in the Delta waterways; and improve public health and safety.

#### B. Implementation of the Program

1. These standards shall be mandatory upon and observed by all departments, boards and commissions of The Resources Agency unless they conflict with statutory authority and shall be used by The Resources Agency in responding to U. S. Army Corps of Engineers Public Notices for permit requests in the Delta.

2. These standards are recommended:

a. For use by all other State agencies and shall become mandatory upon legislative action.

b. For use by all federal agencies and especially the U. S. Army Corps of Engineers and the U. S. Fish and Wildlife Service in the Section 10 (of the Rivers and Harbors Act of 1899) and 404 (of the Federal Water Pollution Control Act of 1972) permit programs for control of navigation, alteration of water bodies, and disposal of dredge materials.

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1/ It is recognized that, generally, the State has jurisdiction over waterways to Mean Higher High Water (MHHW) and has delegated its land use authority to local governments. Consequently, local government is encouraged to establish land use regulations consistent with the Delta Master Recreation Plan including this Waterways Use Program.

2/ "Unauthorized" means a facility which has not received all required Federal, State and local permits or clearances.

3/ "Projects" are defined as any public or private construction, development or alteration which has a potential for physical impact on the environment.

## WATERWAYS USE PROGRAM (Continued)

c. To local governments for implementation by land use regulations consistent with waterways classifications and enactment of any special ordinances necessary, provided they conform with Section 660 of the Harbors and Navigation Code, and for evaluation of all projects with approval contingent upon consistency with the standards.

d. To special districts as guidelines in any construction projects or levee maintenance efforts.

3. The Resources Agency may amend, as required, this Delta Waterways Use Program but only after a public hearing and full review by the affected jurisdictions.

4. The large scale official "Delta Waterways Use Map" shall be maintained in The Resources Agency for reference.

5. The establishment of "Special Use Zones" (speed, wake and recreation) shall receive special emphasis. Speed and wake zones shall be established according to provisions of the Harbors and Navigation Code. A copy of every proposed ordinance which would establish speed or wake zones or special recreational use areas shall be transmitted to The Resources Agency and the Department of Navigation and Ocean Development 4/ for evaluation as to consistency with the objectives and standards of this program. Actual implementation of speed and wake zones or special recreational use areas lies in their adoption, posting and enforcement by local governments.

6. Unauthorized structures require increased identification by the U. S. Corps of Engineers and State Lands Division. All administrative procedures for either removal or permitting such structures will be utilized before relying on judicial determination.

### C. Doctrine of the Public Trust

A declaration upon which the concept of the "public trust" over the State's tide and submerged lands is established and maintained as contained in a statement made by Chief Justice Taney of the U. S. Supreme Court. According to Chief Justice Taney, "When the revolution took place, the people of each state became themselves sovereign; and in that character hold the absolute right to all their navigable waters, and the soils under them, for their own common use." 5/

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4/ As per the requirements of Section 660 of the Harbors and Navigation Code.

5/ Martin v. Waddel, 16 Pet. (41 U.S.) 410, (10 L. Ed. 997).

## WATERWAYS USE PROGRAM (Continued)

Subsequent to the information of the United States, each additional state was admitted into the Union under the doctrine of "equal footing"; that is, on a basis equal to that of the original 13 states. It is through the application of this doctrine in 1845 6/ to the beds of navigable waters that the sovereignty over the tidelands (the lands lying between the lines of ordinary high and low tide) passed to California on September 9, 1850. 7/

One of the earliest references to the "public trust" in California was in 1854 when the State Supreme Court said that the State: (1) holds the complete sovereignty over her navigable bays and rivers and (2) owns such lands for the purpose of preserving the public easement, or right of navigation. 8/ This concept has been further defined as "a title held in trust for the people of the State that they may enjoy the navigation of the waters, carry on commerce over them, and have the liberty of fishing therein free from the destruction or interference of private parties..." 9/

In 1867, the Court established a precedent which pertains specifically to the State's administration of the tidelands within its jurisdiction and the responsibilities of those to whom the State grants such lands. Under this decision, "The right of the State is subservient to the public rights of navigation and fishery, and theoretically, at least, the State can make no disposition of them (the tidelands) prejudicial to the right of the public to use them for the purposes of navigation and fishery, and whatever disposition she makes of them her grantee

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6/ Pollard's Lessee v. Hagen, 3 How. 212, 230 (1845).

7/ There were no definitive guidelines at this time which could extend the sovereignty of either the State or the Federal Government into the navigable waters of the ocean (beyond the low water mark of the marginal sea). The major aspect of this question was clarified with the passage, by Congress, of the Submerged Lands Act (67 Stat. 29, "Public Law 31-83 Congress"). The effect of the Submerged Lands Act was a reaffirmation of the bases upon which the states had earlier based their jurisdiction over the submerged lands, i.e., (1) the validity of the states' historical action at the time of its entrance into the Union in extending its boundary beyond the low water mark out to the 3-mile limit; and (2) the navigable waters criteria in distinguishing Federal and State jurisdiction over submerged lands within a state's boundaries. Under the provisions of the Act, the United States conceded that California owns all lands beneath the ocean between the low water mark and three geographical miles seaward from this mark.

8/ Eldridge v. Cowell, 4 Cal. 80, 87 (1854).

9/ Illinois C. Ry. Co. v. Illinois, 146 U. S. 452.

## WATERWAYS USE PROGRAM (Continued)

takes them upon the same terms upon which she holds them, and, of course, subject to the public rights above mentioned." 10/

The State's power of disposition over the sovereign tide and submerged lands was further defined in 1897 when it was determined that, "No grant of lands covered by navigable waters can be made which will impair the power of a subsequent legislature to regulate the enjoyment of the public rights. The trustee takes the mere proprietary interest in the soil, and holds it subject to the public easement." 11/

A modern statement of the evolving nature of the public trust doctrine is found in the case of Marks v. Whitney (6C. 3d251).

The public uses to which tidelands are subject are sufficiently flexible to encompass changing public needs. In administering the trust the State is not burdened with an outmoded classification favoring one mode of utilization over another.

There is a growing public recognition that one of the most important public uses of the tidelands -- a use encompassed within the tidelands trust -- is the preservation of those lands in their natural state, so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area. It is not necessary to here define precisely all the public uses which encumber tidelands.

Although provisions of the State Constitution (Article I, Section 25; Article XV, Sections 2 and 3) operate as restraints upon grants to provide parties rather than as a constraint upon legislative policy, the Court in People v. California Fish Co., 166 Ca., 576, p. 597 (1913) summarized in part that: "The administration and execution of this trust is committed by the constitution to the legislative department, subject to certain expressed reservation and restrictions." And, in the case of County of Orange v. Heim, 30 Cal. 3d 694 (1963), the court observed that "...the determination of the State Lands Commission pertaining to administration of the trust pursuant to an express delegation of authority from the Legislature must be classified as quasi-legislative in character."

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10/ Ward v. Mulford, 32 Cal. 372 (1867).

11/ Oakland v. Oakland W. F. Co., 118 Cal. 183 (1897). A more recent case addressing the impairment doctrine is County of Orange v. Heim, 30 Ca. 3rd 694.



## WATERWAYS USE PROGRAM (Continued)

### II. DELTA WATERWAYS CLASSIFICATIONS

#### A. Introduction

1. All Delta area waterways are classified as one of the following: "NATURAL AREA", "SCENIC AREA", or "MULTIPLE USE AREA". The natural and scenic designations essentially represent the environmental and aesthetic values of the waterway and its abutting lands, while the multiple use designation reflects the waterway's capability to sustain a greater variety of activities.

2. In addition, three special use zones ("RESTRICTED WAKE", "LIMITED SPEED", and "RECREATIONAL USE") can be established by local governments as overlaid controls for specific situations in conformance with Federal and State standards (see Section II.E.).

3. Specific standards for projects within each waterway classification are established in Section III.

#### B. Natural Area

##### 1. Definition

Those waterways, or portions of waterways and abutting lands, including levees, exhibiting scenic, ecological, or natural values of statewide significance. <sup>12/</sup> These areas should be preserved to perpetuate the public trust; to protect wildlife habitat, existing vegetation, and remnants of the waterways history; to retain areas having solitude and wilderness-like features; and may be used for nonintensive recreation.

Included within this classification are all undeveloped <sup>13/</sup> nonleveed channel islands throughout the Delta. This does not necessarily imply public ownership but only serves to identify all nonleveed islands as areas of significant natural resources and/or historic value.

##### 2. Recreational Activities

Examples of appropriate activities in these areas would be: nature study, hiking, swimming, fishing, canoeing and slow-boat cruising. Water skiing and high-speedboating in

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<sup>12/</sup> Statewide significance means the area has such a high environmental value that it could be a candidate for acquisition as a State or Federal park, preserve, reserve or wildlife management area.

<sup>13/</sup> Undeveloped includes those unleveed islands with unauthorized uses and excludes those portions with authorized uses.



## WATERWAYS USE PROGRAM (Continued)

natural areas should be discouraged and shall be prohibited within certain Special Use Zones (see Section II.E.).

### C. Scenic Area

#### 1. Definition

Those waterways or portions of waterways and abutting lands including levees which are of a lesser ecological or natural value than "Natural Areas" or have the potential for enhancement and which can support a wider range of active recreational activities without adverse environmental impact. These areas shall be managed and used to protect and further the public trust, protect wildlife habitat and existing vegetation, permit compatible public recreation uses, retain remnants of the waterways history, restrict inappropriate development in the waterway, and maintain through-navigation.

#### 2. Recreational Activities

Appropriate in these areas are more intensive activities such as water skiing and high-speedboating except within certain special use zones (see Section II.E.). Also appropriate are a larger variety of land-based recreational uses than acceptable in natural areas.

### D. Multiple Use Area

#### 1. Definition

Those waterways, or portions of waterways, which have little or no natural values and moderate to minor scenic values. They may have substantial waterside development and/or generally have sufficient water surface to accommodate a variety of intensive uses. These areas shall be managed and used to protect and further the public trust, restrict inappropriate development in the waterway, and maintain through-navigation.

#### 2. Recreational Activities

Appropriate in these areas are all activities described for Natural and Scenic Areas except where special use zones (see Section II.E.) have been established.

### E. Special Use Zones

#### 1. Restricted Wake Zone 14/

##### a. Tentative Definition

An area where a wake which strikes the shore, levee, or moored vessel shall not show a white water break.

14/ See Recommendation No. 18, page xiii of the 1976 Delta Master Recreation Plan.

## WATERWAYS USE PROGRAM (Continued)

### b. Purpose

To protect sensitive ecological resources, moored vessels or any area where boat wakes can create a hazard or safety problem.

### c. Implementation

Shall be established by ordinance of the appropriate local governments (see Section I.B.5.).

### d. Identification

Shall be shown on the Delta Waterways Use Map as a red encircled W and shall be posted on the waterway in accordance with the California Waterway Marker System.

## 2. Limited Speed Zone

### a. Definition

Maximum 5 nautical miles per hour speed limit.

### b. Purpose

To protect public safety in areas with navigation hazards or conflicting uses.

### c. Implementation

Shall be established according to Section 267 of the Harbors and Navigation Code and where identified by local ordinance.

### d. Identification

Shall be shown on the Delta Waterways Use Map as a red encircled speed limit and shall be posted on the waterway in accordance with the California Waterway Marker System.

## 3. Recreational Use Zone

### a. Definition

Areas set aside for specific recreational uses, although more than one special use zone may be established in the same area. This includes but is not limited to the following:

- (1) Nature Study Preserve - An area which has natural, wildlife, scientific or educational values, conveys a sense of solitude and merits public acquisition. Hunting and trapping should be prohibited.

## WATERWAYS USE PROGRAM (Continued)

(2) Swimming Site - Public or private beaches open for public use only when supervising personnel are present.

(3) Boat Anchorage Site - Areas protected from prevailing winds and frequently used for temporary mooring by recreational boaters.

(4) Canoe Channel - Waterways, or portions thereof which are most appropriate for use by nonmotorized boats.

(5) No Ski Zone - Areas where waterskiing is dangerous or undesirable.

### b. Purpose

To protect public safety and/or eliminate conflicting activities in areas that are clearly suited for a particular recreational use.

### c. Implementation

Shall be established through enactment of appropriate local ordinances (see Section I.B.5.). The Resources Agency may recommend such areas to the appropriate local governing body.

### d. Identification

Shall be shown on the Delta Waterways Use Map by an appropriate symbol and should be posted on site.

## WATERWAYS USE PROGRAM (Continued)

### III. DELTA WATERWAYS PROJECT STANDARDS

#### A. Policy of "Water-Dependent" Projects

##### 1. Policy

It is the basic policy of this program that only water-dependent projects and essential transportation, water conveyance and utility projects (subject to the specific standards of Section III.D) shall be authorized in, or over the waterways of the Sacramento-San Joaquin Delta. Local governments should limit projects on abutting lands to those which are water-dependent.

No new floating or fixed residential structures, recreation rooms or living quarters of any kind shall be permitted in, on or over any Delta waterway. All existing unauthorized floating or fixed residential structures, recreation rooms or living quarters of any kind placed in, on, or over any Delta waterway since February 1973 15/ shall not be permitted to remain and shall be removed from the waterways. The disposition of all existing unauthorized floating or fixed residential structures, recreation rooms or living quarters of any kind placed in, on or over any Delta waterway prior to February 1973 15/, shall be determined on an individual basis. The policy expressed in this paragraph does not include watercraft which have been designed and used primarily for transportation.

##### 2. Definition

Water-dependent means a project, or components of a project which requires immediate water frontage to accomplish its intended function.

##### 3. Examples

Docks, piers, boatsheds, berthing, launching, fuel, and pumpout facilities; water recreation equipment rentals; fishing sites; waterside parks; boat anchorages; pump, drain and outlet structures; industrial facilities for the shipping or receiving of raw or processed materials by water. Waterview restaurants, having public access to and along the shoreline and with design features which complement the immediate environment, may also be considered as water-dependent.

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15/ Date of Delta Master Recreation Plan which prohibited placing these kinds of structures in or over Delta waterways.

## WATERWAYS USE PROGRAM (Continued)

### B. Exemptions

#### 1. Exemption Process

Project proposals (public or private) may be exempted from one or more of these standards, upon a finding (by The Resources Agency when State permits are required) that a clear public need is demonstrated, the public trust will not be significantly adversely affected, no feasible alternative location exists and adequate mitigation of adverse impact is provided. However, an exemption for a proposed project within a "Natural Area" shall be preceded by a public review of an initial study or environmental impact report which has been circulated through the State and metropolitan clearinghouses.

#### 2. Fully Exempted Projects

a. Repair or replacement, without expansion, of all existing and authorized water-dependent facilities will be permitted. Expansion of existing facilities, however, will be subject to these standards.

b. Agricultural projects such as pumps, drains and other water-dependent facilities are exempt from these standards. Agricultural projects shall not be interpreted to include any agricultural-related industry as an exempted use.

### C. General Project Standards

#### 1. Planning and Coordination

##### a. Projects shall:

(1) Have been granted all necessary Federal, State and local permits prior to any work in, on, over or abutting waterways or shall be considered as unauthorized. <sup>16/</sup> (See Chapter VII of the Delta Master Recreation Plan for description of permits.)

(2) Be consistent with the concept of the public trust.

(3) Be compatible with the classification of, and pre-dominant uses and development on, the waterway.

##### b. Projects shall not:

(1) Limit the diversity of public uses appropriate in the waterways as determined by its classification.

(2) Reduce public use of, or access to, approved recreation areas or areas in the public trust.

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<sup>16/</sup> Unauthorized means a facility which has not received all required Federal, State and local permits or clearances.



## WATERWAYS USE PROGRAM (Continued)

c. Projects should be consistent with local ordinances and plans, adopted regional plans and the objectives and standards of this program. Local governments should ensure that their regulations, actions, policies and fiscal programs are consistent with the following standards.

### 2. Siting and Construction

a. Projects shall be clustered in areas of similar uses, wherever feasible.

b. Private projects in, on, or over the waterways should be joint or community use, wherever feasible.

c. Only the water-dependent components of any project shall be located in, on or over the waterway. Local government should limit projects on abutting shorelines to those which are water-dependent.

d. Maximum extensions perpendicular (into) and parallel (along) any waterway for all proposed private, commercial and public structures shall be subject to the most restrictive of the following if they are to be located in-channel:

(1) Maximum extensions into the waterway: 17/

(a) 200 ft. at mean lower low water (MLLW) for commercial and public facilities.

(b) 100 ft. at MLLW or to the line of existing adjacent structures in areas of intensive shoreline development, whichever is less, for private facilities.

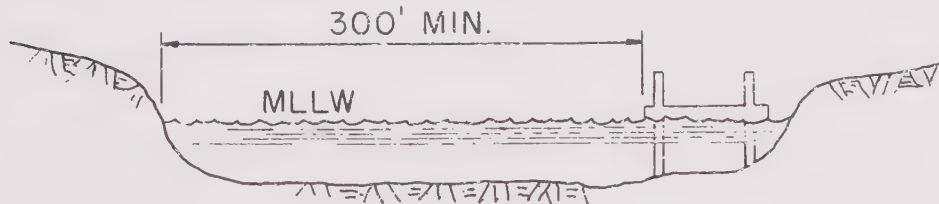
(c) One-third of the horizontal distance across the waterway at MLLW.

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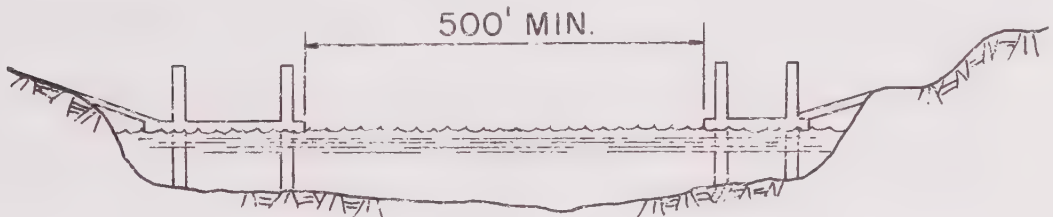
17/ These criteria may be waived if the proposed project is to be located at the navigable extreme of dead-end sloughs, within out-of-channel lagoons or behind protective berms or levees provided that water quality and navigation will not be adversely affected.

WATERWAYS USE PROGRAM (Continued)

- (d) 300-foot clearance <sup>18/</sup> between the intrusion's maximum extension and the undeveloped opposite bank at MLLW.  
<sup>19/</sup>



- (e) 500-foot clearance <sup>18/</sup> between the intrusion's maximum extension and the maximum extension of any intrusion from the opposite bank. <sup>19/</sup>



(2) Maximum extensions along and within the waterway:

- (a) Shall use the minimum necessary shoreline.
- (b) Shall be no more than 100 feet or one-half the shoreline length of the upland property, whichever is more restrictive, for private, non-commercial structures.
- (c) Shall be a maximum of 350 feet (either continuous or discontinuous) for commercial and public facilities unless it is determined, through the exemption process, that additional waterway frontage is necessary for a commercially feasible facility.

<sup>18/</sup> The purpose of this criterion is to maintain a 100-foot unrestricted navigation channel (existing law requires a 5-nautical-miles-per-hour speed limit within 200 feet of in-water construction occupied by people or boats).

<sup>19/</sup> This restriction may be waived in areas of existing and authorized developments.

## WATERWAYS USE PROGRAM (Continued)

### 3. Public Health and Safety

a. Projects with structures for human habitation or visitation shall be prohibited in the high velocity flow floodway to meet the requirements of the Federal Flood Disaster Protection Act of 1973. In the adjacent flood-prone area, such structures should be protected from, or elevated above, the "100-year flood".

b. Projects in, on, or over the waterway shall:

(1) Not adversely affect the required flood carrying capacity of a channel or create a potential of dangerous flotsam.

(2) Not create a safety or navigation hazard.

(3) Not create adversely competing uses.

(4) Not adversely affect the stability of the levee of lands adjacent to the waterway or cause the formation of sandbars or shoals.

c. Project approvals may be conditioned upon removal of debris, abandoned structures or any other safety hazard.

d. New access corridors to the waterways should be adequately policed and maintained.

### 4. Environmental and Aesthetic

a. Projects in, on, or over the waterways shall:

(1) Cause minimum disturbance to the shoreline area.

(2) Cause minimum dredged, fill, or bulkheading.

(3) Utilize maximum compatibility of design, materials, texture, and color with existing natural features.

(4) Mitigate for lost vegetation.

b. Projects in, on, or over the waterways shall not:

(1) detract from the general aesthetics of the area.

(2) Create a substantial adverse impact upon marshes and riparian wildlife habitat.

## WATERWAYS USE PROGRAM (Continued)

(3) Create a substantial adverse impact upon the aquatic environment and streambed. Project construction shall be timed to ensure there is no significant adverse impact upon anadromous fish runs according to procedures established in Sections 1500, 1601 and 1602 of the Fish and Game Code.

(4) Reduce the ecological or scenic values of an existing or approved State or local park, ecological preserve or wildlife management area. Projects shall also be evaluated for their impact upon such areas which have been formally recommended for acquisition by appropriate governmental agencies.

### D. Specific Projects Standards

#### 1. Flood Control Projects

Include both public and private physical construction works and maintenance efforts for the protection of land areas from Delta waters.

##### a. Public Programs

All State fiscal assistance programs for Delta levees shall ensure as a minimum that the following objectives and standards are met. The U. S. Army Corps of Engineers, special districts and local governments should ensure that their regulations, actions, policies and fiscal programs are consistent with the following.

##### b. "Natural Areas"

Vegetation in, on, or over Delta waterways shall be retained, and vegetation on levees should be retained, except for that which adversely affects levee stability, navigation, or the required flood carrying capacity of the channel. State fiscal assistance programs shall give priority to retention of vegetation. Vegetation losses should be mitigated by replacement of identical or improved vegetation in areas where replacement would not adversely affect levee stability, navigation, or the required flood carrying capacity of the channel.

##### c. "Scenic Areas" and "Multiple Use Areas"

Vegetation in, on, or over Delta waterways and levees should be retained to the maximum extent possible except for that which adversely affects levee stability, navigation, or the required flood carrying capacity of the channel.

## WATERWAYS USE PROGRAM (Continued)

### 2. Parks and Recreation Projects

Include both public and private areas open to the public for recreation.

#### a. "Natural Areas"

Projects on State lands shall be limited to those for non-intensive activities relying primarily on water access; other public and private parks should be similarly limited. Facilities should be nonobtrusive and have a minimal impact on the area. No facilities which preclude use by the public should be permitted.

#### b. "Scenic Areas" and "Multiple Use Areas"

Appropriate in these areas are more intensive use water-dependent projects such as boat launching sites, developed boat destination anchorages, fishing access sites and parks supporting a wider range of activities. All such projects shall ensure that the scenic values of the area are retained with mitigation for vegetation loss. Land access to the sites is desirable if feasible.

All nonleveed channel islands throughout the Delta are classified as "Natural Areas". However, within Scenic and Multiple Use waterways, this classification does not preclude public projects on or within the islands for purposes of recreation, education and wildlife enhancement.

### 3. Transportation, Water Conveyance and Utility Projects

Include, but are necessarily limited to, public and private roads, bridges, pipelines, power lines, water and sewage treatment facilities and aqueducts.

#### a. "Natural Areas"

Projects shall not be located in, on, or over the waterways unless the exemption process (Section III.B.1.) clearly indicates a public need, lack of a feasible alternative location and establishes a requirement for the highest degree of mitigation. Projects on abutting lands should be permitted by local governments only under the same conditions.

#### b. "Scenic Areas" and "Multiple Use Areas"

Projects in, on, or over the waterways shall be limited to existing corridors and locations to minimize scenic intrusions. Other corridors or locations may be developed upon a finding in the exemption process (Section III.B.1.) that feasible



## WATERWAYS USE PROGRAM (Continued)

alternate locations are not available. Projects on abutting lands should be permitted by local governments only under the same conditions.

### 4. Industrial Projects

Include, but are not necessarily limited to, production facilities, piers, wharves, and loading-unloading facilities.

#### a. "Natural Areas" and "Scenic Areas"

Projects shall be prohibited in, on, or over the waterways and should be prohibited within abutting lands by local governments.

#### b. "Multiple Use Areas"

Projects in, on, or over the waterways shall be limited to water-dependent facilities and on abutting lands should be similarly limited by local governments.

### 5. Commercial Projects

Include, but are not necessarily limited to, piers, docks, wharves, marinas and attendant facilities, restaurants, bars, lodging, fishing and water-dependent recreational facilities.

#### a. "Natural Areas"

Projects shall be prohibited in, on, or over the waterways and should be prohibited within abutting lands by local governments.

#### b. "Scenic Areas"

Projects in, on, or over the waterways shall be limited to water-dependent facilities, subject to the following:

(1) Marinas and attendant facilities shall be located out of channel; i.e., behind berms, levees or in dead-end sloughs.

(2) Water-view restaurants may be allowed, providing the project has minimal adverse impact, is designed to be highly compatible with the natural environment and includes public access to and along the shoreline.

(3) Floating restaurants shall be limited to the interior of lagoons, basins or marinas unless located at sites in existing restricted speed zones or adjacent to existing construction and do not create conflicting uses or adverse environmental impact.

## WATERWAYS USE PROGRAM (Continued)

(4) Moored vessels having historic values, as determined by The Resources Agency, may be retained or placed at appropriate sites.

Projects on abutting lands should be similarly limited by local governments.

### c. "Multiple Use Areas"

Projects in, on, or over the waterways shall be limited to water-dependent facilities. Marinas and attendant water-dependent facilities, floating restaurants and historic vessels may be located in-channel subject to through-navigation standards of Section III.C.2.d. Projects on abutting lands should be similarly limited by local governments.

## 6. Private Projects

Include, but are not necessarily limited to, piers, docks, boat-sheds, residences and boat and hunting club facilities.

### a. "Natural Areas"

Projects shall be prohibited in, on, or over the waterways and should be prohibited within abutting lands by local governments.

### b. "Scenic Areas"

Projects in, on, or over the waterways shall be limited to group use or community use water-dependent facilities. Projects on abutting lands should be similarly limited by local governments.

### c. "Multiple Use Areas"

Projects in, on, or over the waterways shall be limited to water-dependent facilities. Projects on abutting lands should be required, by local governments, to be clustered in areas of similar uses. Residential structures on abutting lands should be limited by local governments to Multiple Use Areas and to construction which is adequately protected from flooding and designed to compliment the environment.



## APPENDIX C

### DEMOGRAPHIC CHARACTERISTICS OF RECREATIONISTS





SEX

	RECREATIONISTS	
	N	%
Male	2,927	79.0
Female	707	19.1
No Response	67	1.8
	3,701	100.0

AGES

	RECREATIONISTS	
	N	%
15-19	72	1.9
20-24	307	8.3
25-29	374	10.1
30-34	410	11.0
35-39	331	8.9
40-44	338	9.1
45-49	362	9.8
50-54	381	10.3
55-59	375	10.1
60-64	293	7.9
65-69	197	5.3
Over 70	154	4.2
No Response	107	2.9
	3,701	100.0

MARITAL STATUS

	RECREATIONISTS	
	<u>N</u>	<u>%</u>
Married	2,706	73.1
Single	845	22.8
Other	42	1.1
No Response	<u>108</u>	<u>2.9</u>
	3,701	100.0

HOUSEHOLD SIZE

	RECREATIONISTS	
	<u>N</u>	<u>%</u>
One Person	337	9.1
Two or Three Persons	2,079	56.1
Four or Five Persons	1,005	27.2
Six or Seven Persons	145	3.9
Eight or Nine Persons	23	0.6
No Response	<u>112</u>	<u>3.0</u>
	3,701	100.0

### EMPLOYMENT STATUS

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Employed Full Time	2,509	67.8
Employed Part Time	265	7.2
Unemployed	198	5.3
Retired	585	15.8
No Response	<u>144</u>	<u>3.9</u>
	3,701	100.0

### EDUCATION

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Elementary	190	5.1
High School	1,447	39.1
College	1,460	39.4
Advanced Degree	463	12.5
No Response	<u>141</u>	<u>3.8</u>
	3,701	100.0

OCCUPATIONS

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Professional, Technical	947	25.6
Manager/Administrator	512	13.8
Clerical	148	4.0
Craftsman	403	10.8
Operatives	321	8.7
Sales Worker	247	6.7
Laborers	262	7.1
Service Worker	161	4.4
Military	46	1.2
Housewife	114	3.1
Unspecified	527	14.2
No Response	<u>13</u>	<u>0.4</u>
	3,701	100.0

HOUSEHOLD INCOME

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
\$ 0 - 2,999	65	1.8
3,000 - 5,999	165	4.5
6,000 - 9,999	289	7.8
10,000 - 14,999	520	14.1
15,000 - 19,999	619	16.7
20,000 - 24,999	611	16.5
25,000 - 29,999	387	10.5
Over \$30,000	702	19.0
No Response	<u>343</u>	<u>9.3</u>
	3,701	100.0

DAYS OFF DURING A WEEK

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Weekends Off	1,963	53.0
Weekdays Off	442	11.9
Days Off Variable	550	14.9
All Week Off	163	4.4
No Response	<u>583</u>	<u>15.8</u>
	3,701	100.0





APPENDIX D

RECREATION EXPERIENCE CHARACTERISTICS -  
VISITORS



LENGTH OF ENTIRE VISITOR TRIP IN DAYS

	VISITORS	
	<u>N</u>	<u>%</u>
1 to 3 Days	2,329	67.0
4 to 7 Days	195	5.6
Over One Week	141	4.1
No Response	<u>813</u>	<u>23.4</u>
	3,478	100.0

ORIGIN OF VISITORS BY ZIP CODE AREA

	VISITORS	
	<u>N</u>	<u>%</u>
Sacramento	416	12.0
Stockton	388	11.1
Antioch	241	6.9
Concord	163	5.0
San Jose	103	2.9
Pittsburg	101	2.9
Oakland	88	2.6
Lodi	82	2.4
Walnut Creek	78	2.2
Richmond	70	2.0
San Francisco	70	2.0
Brentwood	55	1.6
Hayward	55	1.6

ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	N	%
Martinez	50	1.4
Oakley	50	1.4
Fairfield	44	1.3
Fremont	44	1.3
Livermore	41	1.2
Rio Vista	34	1.0
Vacaville	32	0.9
Bethel Island	31	0.9
Modesto	30	0.9
Sunnyvale	30	0.9
San Leandro	29	0.8
Tracy	28	0.8
Vallejo	27	0.8
Pleasant Hill	26	0.7
Berkeley	25	0.7
Manteca	22	0.6
Alameda	21	0.6
Byron	21	0.6
Lafayette	20	0.6
Pleasanton	20	0.6
Napa	19	0.5
Santa Clara	18	0.5
Carmichael	17	0.5
Davis	16	0.5
Elk Grove	15	0.4
Orinda	15	0.4
Redwood City	15	0.4
West Sacramento	15	0.4
Fair Oaks	14	0.4
Citrus Heights	13	0.4
Clayton	13	0.4



ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	N	%
San Lorenzo	13	0.4
Alamo	12	0.3
Moraga	12	0.3
Newark	12	0.3
Pinole	12	0.3
El Cerrito	11	0.3
San Mateo	11	0.3
Walnut Grove	11	0.3
Benicia	10	0.3
Daly City	10	0.3
Danville	10	0.3
Mountain View	10	0.3
Santa Cruz	10	0.3
Santa Rosa	10	0.3
Folsom	9	0.3
Fresno	9	0.3
Los Gatos	9	0.3
North Highlands	9	0.3
San Rafael	9	0.3
San Ramon	9	0.3
Los Angeles	8	0.2
Isleton	8	0.2
Pacifica	8	0.2
Petaluma	8	0.2
Travis A.F.B.	8	0.2
Burlingame	7	0.2
Lathrop	7	0.2
Milpitas	7	0.2
Novato	7	0.2
Sebastopol	7	0.2

ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	N	%
South San Francisco	7	0.2
Union City	7	0.2
Broderick	6	0.2
Campbell	6	0.2
Dixon	6	0.2
Hood	6	0.2
Los Altos	6	0.2
Mill Valley	6	0.2
Orangevale	6	0.2
Rodeo	6	0.2
Saratoga	6	0.2
Sonoma	6	0.2
Suisun City	6	0.2
Aptos	5	0.1
Millbrae	5	0.1
Palo Alto	5	0.1
Rancho Cordova	5	0.1
Redding	5	0.1
San Anselmo	5	0.1
San Carlos	5	0.1
Arnold	4	0.1
Belvedere - Tiburon	4	0.1
Clarksburg	4	0.1
Cupertino	4	0.1
Knightesen	4	0.1
Merced	4	0.1
Sausalito	4	0.1
Thornton	4	0.1
Woodbridge	4	0.1
Woodland	4	0.1

ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	N	%
Atwater	3	0.1
Auburn	3	0.1
Bakersfield	3	0.1
Calistoga	3	0.1
French Camp	3	0.1
Jackson	3	0.1
Lakewood	3	0.1
Linden	3	0.1
Menlo Park	3	0.1
Mountain Ranch	3	0.1
Murphys	3	0.1
Oakdale	3	0.1
Oroville	3	0.1
Placerville	3	0.1
Roseville	3	0.1
Tahoe Valley	3	0.1
Tulare	3	0.1
Turlock	3	0.1
Van Nuys	3	0.1
Acampo	3	0.1
Altaville	3	0.1
Belmont	2	0.1
Boulder Creek	2	0.1
Cotati	2	0.1
Costa Mesa	2	0.1
Courtland	2	0.1
Dinuba	2	0.1
Eureka	2	0.1
Galt	2	0.1

ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	<u>N</u>	<u>%</u>
Grass Valley	2	0.1
Long Barn	2	0.1
Nevada City	2	0.1
North Hollywood	2	0.1
Paradise	2	0.1
Pollock Pines	2	0.1
Ripon	2	0.1
Salida	2	0.1
San Diego	2	0.1
Seaside	2	0.1
Shingle Springs	2	0.1
Visalia	2	0.1
Willows	2	0.1
Alhambra	1	0.0
Applegate	1	0.0
Anaheim	1	0.0
Angwin	1	0.0
Annapolis	1	0.0
Avenal	1	0.0
Bella Vista	1	0.0
Blue Lake	1	0.0
Boonville	1	0.0
Boyce Hot Springs	1	0.0
Brookdale	1	0.0
Buena Park	1	0.0
Burbank	1	0.0
Canoga Park	1	0.0
Canyon	1	0.0
Carmel	1	0.0
Castle A.F.B.	1	0.0
Catheys Valley	1	0.0

ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	<u>N</u>	<u>%</u>
Ceres	1	0.0
Chico	1	0.0
Clearlake Oaks	1	0.0
Cloverdale	1	0.0
Coleville	1	0.0
Colombia	1	0.0
Colusa	1	0.0
Corona	1	0.0
Cottonwood	1	0.0
Crescent City	1	0.0
Crockett	1	0.0
Cutler	1	0.0
Deer Park	1	0.0
Diablo	1	0.0
Diamond Springs	1	0.0
Dobbins	1	0.0
Drytown	1	0.0
Duarte	1	0.0
El Cajon	1	0.0
El Dorado	1	0.0
El Granada	1	0.0
El Monte	1	0.0
Elverta	1	0.0
Esparto	1	0.0
Farmington	1	0.0
Forbestown	1	0.0
Fort Ord	1	0.0
Fowler	1	0.0
Goleta	1	0.0



ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	N	%
Gonzales	1	0.0
Goshen	1	0.0
Grover City	1	0.0
Guerneville	1	0.0
Half Moon Bay	1	0.0
Hawthorne	1	0.0
Hayfork	1	0.0
Hermosa Beach	1	0.0
Holt	1	0.0
Hughson	1	0.0
Huntington Beach	1	0.0
Ione	1	0.0
Jamestown	1	0.0
Kerman	1	0.0
Kernville	1	0.0
Kings Beach	1	0.0
Knights Landing	1	0.0
La Honda	1	0.0
Lake Elsinore	1	0.0
Larkspur	1	0.0
Liberty Farms	1	0.0
Lockeford	1	0.0
Long Beach	1	0.0
Los Banos	1	0.0
Lynwood	1	0.0
Madera	1	0.0
Marina	1	0.0
Marysville	1	0.0
Mather A.F.B.	1	0.0
Middletown	1	0.0

ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	<u>N</u>	<u>%</u>
Mokelumne Hill	1	0.0
Montclair	1	0.0
Monterey	1	0.0
Niland	1	0.0
Norco	1	0.0
Northridge	1	0.0
Orange Cove	1	0.0
Palmdale	1	0.0
Patterson	1	0.0
Pebble Beach	1	0.0
Pico Rivera	1	0.0
Pioneer	1	0.0
Pt. Arena	1	0.0
Rescue	1	0.0
Rio Linda	1	0.0
Riverbank	1	0.0
Rutherford	1	0.0
Ryde	1	0.0
Saint Mary's College	1	0.0
Salinas	1	0.0
Salyer	1	0.0
San Andreas	1	0.0
San Bernardino	1	0.0
San Luis Obispo	1	0.0
Santa Barbara	1	0.0
Santa Maria	1	0.0
Santa Monica	1	0.0
Saugus	1	0.0
Sheridan	1	0.0

ORIGIN OF VISITORS BY ZIP CODE AREA (Continued)

	VISITORS	
	<u>N</u>	<u>%</u>
Sierra City	1	0.0
Simi Valley	1	0.0
Soledad	1	0.0
South Lake Tahoe	1	0.0
Stevinson	1	0.0
Sutter Creek	1	0.0
Tahoe City	1	0.0
Torrance	1	0.0
Tuolumne	1	0.0
Ukiah	1	0.0
Valencia	1	0.0
Waterford	1	0.0
Weimar	1	0.0
West Covina	1	0.0
West Sacramento	1	0.0
Whittier	1	0.0
Willits	1	0.0
Wilton	1	0.0
Winters	1	0.0
Yuba City	1	0.0
*Out of State	2	0.1
Key punch errors	20	0.6
No Response	<u>75</u>	<u>2.2</u>
 Total	 3,478	 100.0

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\* These people had moved to another state.

ORIGIN OF VISITORS BY COUNTY

	VISITORS	
	N	%
Contra Costa	1,023	29.4
San Joaquin	581	16.7
Sacramento	557	16.0
Alameda	363	10.4
Santa Clara	208	6.0
Solano	166	4.8
San Mateo	84	2.4
San Francisco	68	2.0
Stanislaus	46	1.3
Yolo	36	1.0
Sonoma	35	1.0
Los Angeles	35	1.0
Marin	34	1.0
Napa	23	0.7
Santa Cruz	16	0.5
Placer	15	0.4
Fresno	11	0.3
Merced	11	0.3
El Dorado	9	0.3
Monterey	9	0.3
Butte	8	0.2
Calaveras	8	0.2
Shasta	8	0.2
Tulare	8	0.2
Nevada	7	0.2
Amador	6	0.2
Kern	5	0.1

ORIGIN OF VISITORS BY COUNTY (Continued)

	VISITORS	
	<u>N</u>	<u>%</u>
Orange	5	0.1
Humboldt	4	0.1
San Diego	4	0.1
Yuba	3	0.1
Riverside	3	0.1
San Bernardino	3	0.1
Santa Barbara	3	0.1
Tuolumne	3	0.1
Glenn	2	0.1
Mendocino	2	0.1
San Luis Obispo	2	0.1
Trinity	2	0.1
Colusa	1	0.0
Imperial	1	0.0
Kings	1	0.0
Madera	1	0.0
Mariposa	1	0.0
Mono	1	0.0
Sierra	1	0.0
Alpine	1	0.0
*Out of State	2	0.1
No Response	<u>53</u>	<u>1.5</u>
TOTAL	3,478	100.0



TOTAL ONE-WAY MILEAGE OF VISITORS' TRIPS

<u>One-Way Mileage</u>	<u>VISITORS</u>	
	<u>N</u>	<u>%</u>
1 - 10	286	8.2
11 - 25	489	14.1
26 - 50	875	25.2
51 - 75	554	15.9
76 - 100	364	10.5
101 - 150	206	5.9
151 - 200	121	3.5
201 - 300	73	2.1
301 - 500	63	1.8
501 - 1,000	34	1.0
No Response	<u>413</u>	<u>11.9</u>
Total	3,478	100.0

VISITORS' GROUP EXPENDITURES ON  
TRIP TO THE DELTA STUDY AREA

	<u>VISITORS</u>	
	<u>N</u>	<u>%</u>
\$ 0	560	16.1
1 - 10	670	19.3
11 - 25	798	22.9
26 - 50	658	18.9
51 - 100	443	12.7
101 - 200	215	6.2
201 - 500	96	2.8
501 - Highest	<u>38</u>	<u>1.1</u>
Total	3,478	100.0

(Average Visitors' Group Expenditure - \$48)

TYPE OF GROUPS DESCRIBED BY RECREATIONISTS

	<u>VISITORS</u>	
	<u>N</u>	<u>%</u>
Alone	291	8.4
One Family	1,251	36.0
Two or More Families	366	10.5
Friends	623	17.9
Family and Friends	782	22.5
Organized Groups	69	2.0
Other	39	1.1
No Response	<u>57</u>	<u>1.6</u>
	3,478	100.0

# SIZE OF RECREATION GROUPS

<u>Group Size</u>	<u>VISITORS</u>	
	<u>NO. OF GROUPS</u>	<u>%</u>
1	247	7.1
2	967	27.9
3	406	11.7
4	568	16.3
5	245	7.0
6	243	7.0
7	129	3.7
8	105	3.0
9	65	1.9
10	58	1.7
11 - 15	153	4.4
16 - 20	49	1.4
21 - 25	26	0.7
26 - 30	15	0.4
31 - 35	7	0.2
36 - 40	5	0.1
41 - 45	3	0.1
46 - 50	3	0.1
51 - 55	2	0.1
56 - 60	-	-
61 - 65	2	0.1
66 - 70	3	0.1
71 - 75	2	0.1
76 - 80	2	0.1
81 - 85	3	0.1
86 - 90	-	-
91 - 95	1	0.0
96 - 100	1	0.0
101 - 153	3	
Sub-Total	3,315	95.20
No Response	163	4.70
TOTAL	3,478	100.00

Average Visitors' Recreation Group Size - 5.23



APPENDIX E

RECREATION EXPERIENCE CHARACTERISTICS -

RESIDENTS





ORIGIN OF RESIDENTS BY COUNTY

<u>County</u>	<u>RESIDENTS</u>	
	<u>N</u>	<u>%</u>
Sacramento	84	37.7
Contra Costa	92	41.2
San Joaquin	40	17.9
Yolo	<u>7</u>	<u>3.1</u>
	223	100.0

RESIDENTS' GROUP EXPENDITURES ON A TYPICAL  
RECREATION DAY IN THE DELTA

	<u>RESIDENTS</u>	
	<u>N</u>	<u>%</u>
\$ 0 - 500	39	17.5
1 - 10	23	10.3
11 - 25	52	23.2
26 - 50	53	23.8
51 - 100	38	17.0
101 - 200	11	4.9
201 - 500	4	1.8
501 - Highest	<u>3</u>	<u>1.3</u>
	223	100.0

(Average Residents' Group Expenditure - \$37)

# SIZE OF RECREATION GROUPS

<u>Group Size</u>	<u>RESIDENTS</u>	
	<u>NO. OF GROUPS</u>	<u>%</u>
1	2	0.9
2	16	7.2
3	10	4.5
4	12	5.4
5	6	2.7
6	8	3.6
7	3	1.3
8	8	3.6
9	-	-
10	8	3.6
11 - 15	16	7.1
16 - 20	9	3.9
21 - 25	2	0.8
26 - 30	7	3.0
31 - 35	3	1.3
36 - 40	2	0.8
41 - 45	1	0.4
46 - 50	2	0.8
51 - 55	-	-
56 - 60	-	-
61 - 65	1	0.4
66 - 70	1	0.4
71 - 75	1	0.4
76 - 80	-	-
81 - 85	-	-
86 - 90	-	-
91 - 95	-	-
96 - 100	-	-
101 - 153	-	-
Sub-Total	118	52.10
No Response	105	47.10
TOTAL	223	100.0

Average Residents' Group Size - 12.5.

NUMBER OF MONTHS PER YEAR  
RESIDENTS LIVED IN THE DELTA

<u>No. of Months</u>	<u>RESIDENTS</u>	
	<u>N</u>	<u>%</u>
One	2	0.9
Two	3	1.3
Three	6	2.7
Four	2	0.9
Five	-	-
Six	6	2.7
Seven	1	0.4
Eight	1	0.4
Nine	1	0.4
Ten	-	-
Eleven	1	0.4
Twelve	190	85.2
No Response	<u>10</u>	<u>4.5</u>
	223	100.0

NUMBER OF DAYS DELTA RESIDENTS ENGAGED IN OUTDOOR  
RECREATION IN THE DELTA

<u>Days Engaged in Outdoor Recreation in the Delta</u>	<u>RESIDENTS</u>	
	<u>N</u>	<u>%</u>
1 - 10	23	10.1
11 - 20	21	9.4
21 - 30	27	12.1
31 - 60	43	19.1
61 - 90	13	5.7
91 - 150	36	16.0
Over 150	42	19.0
No Response	<u>18</u>	<u>8.1</u>
TOTAL	223	100.0





## APPENDIX F

### RECREATION ACTIVITIES



RECREATION ACTIVITIES

<u>Activities</u>	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Motorboating	1,809	48.9
Fishing	1,807	48.8
Relaxing	1,492	40.3
Driving for Pleasure	1,377	37.2
Sightseeing	1,259	34.0
Overnight Camping	978	26.4
Picnicking	899	24.3
Swimming	853	23.0
Water Skiing	582	15.7
Photography	406	11.0
Bicycling	192	5.2
Sailing	167	4.5
Canoe-Kayak-Rowing	116	3.1
Hunting	112	3.0
Dirt Biking	110	2.9
Flying	47	1.2
Snorkeling or Scuba	37	0.9

TYPE OF FISH RECREATIONISTS FISHED FOR

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Catfish	1,192	32.2
Striped Bass	1,086	29.3
Sturgeon	363	9.8
Black Bass	281	7.6
Salmon	105	2.8
Steelhead	91	2.5
Shad	78	2.1
Frogs	56	1.5
Any and all Kinds	634	17.1
Other	99	2.7

TYPE OF OVERNIGHT CAMPING

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
On Shore	464	12.5
On a Boat	387	10.5
Both	127	3.4

LENGTH OF RECREATIONISTS' BOATS

<u>Length in Feet</u>	<u>Number of Boats</u>	<u>%</u>
6	1	0.0
7	1	0.0
8	2	0.1
10	12	0.3
11	1	0.0
12	87	2.4
13	11	0.3
14	120	3.2
15	80	2.2
16	194	5.2
17	157	4.2
18	241	6.5
19	110	3.0
20	69	1.9
21	37	0.9
22	48	1.3
23	28	0.8
24	42	1.1
25	61	1.6
26	48	1.3
27	28	0.8
28	49	1.3
29	2	0.1
30	41	1.1
31	26	0.7



LENGTH OF RECREATIONISTS' BOATS (Continued)

<u>Length in Feet</u>	<u>Number of Boats</u>	<u>%</u>
32	25	0.7
33	14	0.4
34	9	0.2
35	15	0.4
36	14	0.4
37	3	0.1
38	17	0.5
40	30	0.8
42	6	0.2
43	9	0.2
44	3	0.1
45	5	0.1
46	3	0.1
47	3	0.1
48	2	0.1
49	1	0.0
50	6	1.5
51	1	0.0
54	1	0.0
57	1	0.0
61	1	0.0
No Response	<u>2,026</u>	<u>0.0</u>
TOTAL	3,701	100.0

TYPE OF BOATS USED

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Ski	576	15.6
Cruiser	457	12.3
Houseboat	151	4.1
Sailboat	84	2.3
Other	436	11.8

OWNERSHIP OF BOATS

<u>The Boats Were:</u>	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Owned by Someone in Group	1,495	40.4
Rented in Delta	71	2.0
Borrowed	65	1.8
Rented Outside Delta	2	0.1

ACTIVITIES RECREATIONISTS ENGAGED IN - BY SEASON

Activities	Spring		Summer		Fall		Winter	
	Number of Activities	%	Number of Activities	%	Number of Activities	%	Number of Activities	%
Motorboating	436	14.2	877	14.0	300	16.4	181	13.4
Fishing	478	15.6	786	12.6	298	16.3	240	17.8
Relaxing	369	12.0	730	11.7	210	11.5	176	13.0
Driving for Pleasure	367	12.0	606	9.7	217	11.9	183	13.5
Sightseeing	342	11.2	560	9.0	189	10.3	164	12.1
Overnight Camping	248	8.1	463	7.4	151	8.3	115	8.5
Picnicking	227	7.4	472	7.5	118	6.5	79	5.9
Swimming	187	6.1	531	8.5	92	5.0	42	3.1
Water Skiing	119	3.9	360	5.8	69	3.8	32	2.4
Photography	107	3.5	187	3.0	57	3.1	53	3.9
Sailing	32	1.0	86	1.4	28	1.5	21	1.6
Bicycling	52	1.7	99	1.6	18	1.0	21	1.6
Canoe/Kayak/Rowing	27	0.9	68	1.1	11	0.6	9	0.7
Dirt Biking	25	0.8	51	0.8	21	1.1	12	0.9
Hunting	25	0.8	36	0.6	33	1.8	17	1.3
Flying	11	0.3	23	0.4	9	0.5	3	0.2
Snorkeling/Scuba	9	0.3	18	0.3	8	0.4	2	0.1
TOTAL	3,061	100.0	5,953	100.0	1,829	100.0	1,350	100.0

APPENDIX G

WHY AND WHERE PEOPLE RECREATED IN THE DELTA  
AND ATTITUDES





ALTERNATIVE RECREATION AREAS RECREATIONISTS  
WOULD VISIT IF FOR SOME REASON THE DELTA WERE UNAVAILABLE

	RECREATIONISTS	
	N	%
No Other Place	465	12.6
A City or Town	194	5.2
The Ocean	135	3.6
The San Francisco Bay Area	133	3.6
*A Lake	127	3.4
*Other Lake	126	3.4
Lake Berryessa	110	3.0
Clear Lake	107	2.9
The Mountains	95	2.7
New Hogan Reservoir	85	2.3
Folsom Lake	84	2.3
Recreation Area	80	2.2
Lake Comanche	76	2.1
Lake Tahoe	60	1.6
North San Francisco Bay Area	56	1.5
Shasta Lake	49	1.3
North Sierras	46	1.2
*Other River	38	1.0
Don Pedro Reservoir	29	0.8
*A River	22	0.6
South San Francisco Bay Area	16	0.4
Russian River	15	0.4
American River	14	0.4
Colorado River	13	0.4
South Sierras	11	0.3

ALTERNATIVE RECREATION AREAS RECREATIONISTS  
WOULD VISIT IF FOR SOME REASON THE DELTA WERE UNAVAILABLE  
(Continued)

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
*Other Mountain	9	0.2
San Luis Lake	6	0.2
Feather River	5	0.1
Silver Lake	5	0.1
Lake Pillsbury	3	0.1
Mokelumne River	2	0.1
Coast Range North	2	0.1
Santa Cruz	2	0.1
Cosumnes River	1	0.0
Don't Know	84	2.3
Other	146	3.9
No Response	<u>1,250</u>	<u>34.0</u>
	3,701	100.0

\* A lake - lakes in general; name not specified.

\* Other lake - a specified lake not coded by name as was not on coders' list.

\* A river - rivers in general; name not specified.

\* Other river - a specified river not coded by name as was not on orders' list.

\* Other mountain - a specified mountain not coded by name as was not on coders' list.

REASONS GIVEN BY RECREATIONISTS FOR USING THE DELTA  
INSTEAD OF THE ALTERNATIVE LOCATIONS LISTED

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Convenience/Close	773	20.9
Fishing	193	5.2
Atmosphere	146	3.9
To Visit Someone	136	3.7
Mooring Boats	135	3.6
Like the Delta	109	2.9
Wanted a Change	105	2.8
Water	86	2.3
Live There	78	2.1
No Place Comparable	71	1.9
Sightseeing	44	1.2
Property Owner	39	1.1
Water Skiing	33	0.9
Activities	27	0.7
Launching Boats	27	0.7
Driving for Pleasure	23	0.6
Motorboating	23	0.6
Picnicking	22	0.6
Facilities	17	0.5
Hunting	17	0.5
Bicycling	15	0.4
Relaxing	7	0.2
Swimming	7	0.2
Camping	5	0.1
Less Expensive	5	0.1
Photography	4	0.1
Parking	3	0.1
Dirt Biking	2	0.1
Motorcycling	2	0.1
Services	2	0.1

REASONS GIVEN BY RECREATIONISTS FOR USING THE DELTA  
INSTEAD OF THE ALTERNATIVE LOCATIONS LISTED  
(Continued)

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Bird Watching	1	0.0
Sailing	1	0.0
Flying	1	0.0
Canoeing	1	0.0
Other Reasons	191	5.2
No Response	<u>1,350</u>	<u>36.4</u>
	3,701	100.0

SUMMARIZATION OF RECREATION USE

<u>Location</u>	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Area Number		
1	261	0.9
2	1,219	4.1
3	4,811	16.1
4	702	2.3
5	3,037	10.1
6	8,155	27.2
7	2,308	7.7
8	2,297	7.7
9	811	2.7
Waterways	6,372	21.3
TOTAL	29,973	100.0

WHY DELTA IS A GOOD PLACE FOR OUTDOOR RECREATION

	RECREATIONISTS	
	N	%
Fishing	544	14.7
Atmosphere	417	11.3
Water	235	6.3
Convenience/Close	172	4.6
Facilities	122	3.3
Boat Launching Facilities	101	2.7
Activities	91	2.5
Water Skiing	83	2.2
Fishing Facilities	78	2.1
Mooring-Berthing Facilities	67	1.8
Adequate Access	59	1.6
Picnicking Facilities	52	1.4
Beaches	53	1.4
To Visit Someone	43	1.2
Motorboating	43	1.2
Sightseeing	40	1.1
Bicycling	38	1.0
Launching Facilities	34	0.9
Mooring Boats	29	0.8
Swimming Facilities	26	0.7
Hunting	25	0.7



WHY DELTA IS A GOOD PLACE FOR OUTDOOR RECREATION  
(Continued)

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Camping	20	0.5
Swimming	20	0.5
Relaxing	20	0.5
Driving for Pleasure	17	0.5
Water Skiing Facilities	17	0.5
Sailing	16	0.4
Hunting Facilities	16	0.4
Enjoy the Delta	13	0.4
Property Owner	13	0.4
Camping Facilities	11	0.3
Wildlife - Plantlife	11	0.3
Live There	11	0.3
Dirt Biking	10	0.3
Picnicking	9	0.2
Photography	9	0.2
Bird Watching	5	0.1
Second Home	4	0.1
Canoeing	1	0.0
Other	118	3.2
No Response	<u>1,008</u>	<u>27.2</u>
	3,701	100.0

GRIPES ABOUT PLACES USED FOR OUTDOOR RECREATION

	RECREATIONISTS	
	N	%
Crowded	97	2.6
Water Dirty, Debris	96	2.6
Speedboating Conflicts	84	2.3
Atmosphere	75	2.0
Littering	74	2.0
Service Facilities Inadequate	66	1.8
Parking Facilities Inadequate	60	1.6
Boating Facilities Inadequate	58	1.6
Conflicts with Water Skiers	49	1.3
Beaches Inadequate	48	1.3
Camping Facilities Inadequate	43	1.2
Access Inadequate	43	1.2
Fishing Dock Facilities Inadequate	39	1.1
*"Other" Conflicts	39	1.1
Road Conditions Inadequate	32	0.9
Too Expensive	30	0.8
Facilities Inadequate	30	0.8
Mosquitoes	26	0.7
Water-Related	21	0.6
Picnicking Facilities Inadequate	15	0.4
Untrained Boaters	15	0.4
Rock Dams	13	0.4
Dumping Raw Sewage in Water	13	0.4

GRIPES ABOUT PLACES USED FOR OUTDOOR RECREATION  
(Continued)

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Undesignated Waterways	10	0.3
Swimming Facilities Inadequate	9	0.2
Motorboat Noise	6	0.2
Drinking	6	0.2
Exporting Water	4	0.1
Dirt Bike Facilities Inadequate	3	0.1
Other Facilities Inadequate	1	0.0
Other	151	4.1
No Gripes	1,019	27.5
No Response	<u>1,426</u>	<u>38.5</u>
	3,701	100.0

\* "Other" Conflicts: Conflicts not included in the coding list.

RECREATIONISTS' EXPECTATIONS OF FUTURE USE OF  
THE DELTA IN THE NEXT TWO YEARS

	<u>RECREATIONISTS</u>	
	<u>N</u>	<u>%</u>
Use Will be Same	1,740	47.0
Use Will Increase	1,578	42.6
Use Will Decrease	194	5.2
No Response	<u>189</u>	<u>5.1</u>
	3,701	100.0

## APPENDIX H

### ESTIMATION OF TOTAL RECREATION USE OF DELTA





Vehicular Contribution to Total Recreation Use  
of The Delta

To produce an estimate of the portion of recreational use generated by vehicular activity, the total recreational traffic figures were expanded from the sampling intervals to 12-hour days, and these were expanded to the 365 days of a year. This was done in accordance with the following pattern:

Summary for one year:

- (a) Total number of licenses copied at each site was recorded (only California noncommercial vehicles were tallied; there were 35 sampling sites).
- (b) Total traffic at each site = Total number of licenses copied at that site x sampling rate (one if every license was recorded, two if every other license was recorded, and three if every third license was recorded).
- (c) Average traffic per 15-minute interval = Total traffic at site divided by the number of times that the site was sampled in the year (see Note).
- (d) Total traffic per 12-hour day = Average traffic per 15-minute interval x 48.
- (e) Total number of private vehicles per 12-hour day = Total traffic per day x .862 (86.2 is the percentage of noncommercial vehicles detected in the sampling; i.e., 13.8 percent of the vehicles counted as private vehicles by survey teams were found to be commercial vehicles on the basis of license checks).
- (f) Total number of recreation vehicles per 12-hour day = Total number of private vehicles x .452 (45.2 is the percentage of private recreation vehicles detected in the sampling; i.e., 45.2 is the percentage of persons sampled who indicated that they had recreated in the Delta Area).
- (g) Total number of recreationists per 12-hour day = Total number of recreation vehicles x 5.23 (5.23 is the average number of recreationists per private recreation vehicle as computed from the sampling).
- (h) Total number of recreationists per year = Total number of recreationists per 12-hour day x 365.
- (i) Total number of recreation days per year = Total number of recreationists per year x 1.4 (1.4 is the average number of 12-hour days spent on Delta recreation - computed from samples).

Vehicular Contribution to Total Recreation Use  
of The Delta (Continued)

(j) Totals from each site were accumulated to provide a total for the Delta Area (10,647,883 recreation days).

Note: Average traffic was calculated on the basis of a 15-minute sampling interval. Since not all of the actual sampling intervals were of 15-minute duration, the average traffic per 15-minute interval was calculated by adding the total amount of traffic from 15-minute intervals plus 1/2 the total amount of traffic from 30-minute intervals plus 3/4 the total amount of traffic from 20-minute intervals. This sum was then divided by the number of 15-minute sample visits plus two times the number of 30-minute sampling visits.

Results of the application of this procedure to data obtained may be found in the Delta Outdoor Recreation Survey, Table 78.

Resident Contribution to Total Recreation Use of the Delta

To estimate total recreation use as generated by Residents of the Delta Area, the total population of the survey area was first estimated, the total number of residences in the survey area was determined, and this number was multiplied by the average household size. The number of residences was determined by inspection of assessors records, while average household size was estimated by results of the sampling. The number of residences in the study area was 5,608, and the number of Residents per household was 2.9. Therefore, the estimate of population for the study area was 16,263. This figure was then multiplied by the portion of Residents who engaged in recreation in the Delta Area (.81 as determined by Resident sampling questionnaires). Finally, to estimate the total number of recreation days contributed by Residents of the Delta Area, the estimated total number of Residents who recreated in the Delta Area (13,173) was multiplied by the average number of recreation days per person (94.7) as determined by Resident sampling questionnaires. This resulted in a total of 1,247,501 recreation days contributed by Delta Area Residents.

The estimated total number of recreation days for the year 1977-78 was found by summing the estimated number of recreation days for Residents of the Delta Area and the estimated number of recreation days generated by vehicular activity (Visitors). This procedure produced an estimate of 11,895,384 recreation days for the 1977-78 period.

## APPENDIX I

### TOTAL RECREATION DAYS BY AREAS



TOTAL RECREATION DAYS BY AREAS

	Percentage of Total Visitors*	Number of Visitor Recreation Days by Areas	Percent of Total Residents	Number of Resident Recreation Days by Areas
Areas				
1	0.8	85,183	1.5	18,712
2	4.4	468,506	1.6	19,960
3	9.8	1,043,492	18.7	233,282
4	0.8	85,183	1.9	23,702
5	7.5	798,591	1.5	18,712
6	18.6	1,980,506	25.6	319,360
7	5.6	596,281	3.3	41,167
8	6.1	649,520	3.1	38,672
9	1.7	181,014	2.5	31,187
Waterways	20.2	2,150,872	14.9	185,877
Misc.	4.9	521,746	2.5	31,187

\* Only "Primary Location" percentages were used in calculating number of Visitor and Resident recreation days by areas due to multiple responses across Tables 37A and 37B in the Delta Outdoor Recreation Survey.

Note: Underestimates may have occurred since "Secondary" "Tertiary" location percentages were not used in calculating number of Visitor and Resident recreation days by areas.





## APPENDIX J

ESTIMATION OF TOTAL EXPENDITURES BASED ON MEANS



ESTIMATION OF TOTAL EXPENDITURES BASED ON MEANS

	:		:	Mean	:		:		:
	:		:	Number of	:		:	Average	:
	:	Mean	:	Days Spent	:	Mean	:	Expended	:
	:	Group	:	on Delta	:	Group	:	Per Person	:
	:	Expenditures	:	Recreation	:	Size	:	Per Day	:
	:		:		:		:		:
Visitors		\$48.00		1.4		5.23		\$6.55	
									\$69,743,636
Residents		\$37.00		94.7		12.5		\$3.13	
									\$ 3,892,147

\* Total expenditures for the year were calculated by multiplying the average expended per person by the average number of days spent on Delta Recreation. This was then multiplied by the estimated number of people who participated in Delta Recreation.



## APPENDIX K

### FORECASTS OF FUTURE RECREATION USE OF THE DELTA AREA





FORECASTS OF FUTURE RECREATION  
USE OF THE DELTA AREA

<u>Year</u>	<u>Population of Counties Adjacent to Delta</u>	<u>Total Number of Recreationists</u>	<u>Total Recreation Days</u>
1977-78	5,524,300	7,618,804	11,895,384
1985	5,983,000	8,251,417	12,883,095
1990	6,319,600	8,715,637	13,607,890





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